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AUTHOR	Smith, Anthony
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ABSTRACT

Designed to provide instructional materials for use by vocational agriculture teachers, this unit on livestock judging contains materials based on five competencies needed to be a livestock producer. The following competencies are covered: general preparation for livestock judging, selection, and evaluation; judging, selection, and evaluation of beef cattle; judging, selection, and evaluation of swine; judging, selection, and evaluation of sheep; and giving oral reasons. Lessons on each of these competencies contain a performance objective, teaching-learning activities, supplemental materials, and a criterion-referenced measure. Suggestions for using problem-solving procedures, audio-visual aids, resource persons, field trips, and supplementary materials are outlined in the section on teaching-learning activities provided for each lesson. Transparency masters of charts, tables, and illustrations are also included in each lesson. (Related documents contain similar instructional materials on breeding livestock, dairy housing and equipment, feeding livestock, tobacco production, and corn production--see note.) (MN)

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L I V E S T O C K J U D G I N G

A Unit for Teachers of Vocational Agriculture

Developed by

Anthony Smith
Teacher of Vocational Agriculture
Montgomery County High School
Mt. Sterling, Kentucky

Supervised by

Rodney W. Tulloch
Associate Professor and Project Director
University of Kentucky

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LIVESTOCK JUDGING

Number of Class Periods _____ Month(s) _____

INTRODUCTION

Livestock judging is an important tool in the selection and evaluation of livestock. The ability to judge livestock accurately can be used to further economic gains (or diminish losses) in the livestock industry. Showing and judging livestock has led to improvement of all breeds of livestock. In order to be an effective judge, one must know a great deal about the type of livestock to be judged. For example, a judge must know which parts of an animal are of greatest economic importance and which are of least importance.

To give reasons why animals are placed in a certain order requires a thorough knowledge of the names and importance of the parts of the livestock being judged. It also requires the ability to organize thoughts logically. If reasons are to be given orally, judges should have an effective speaking ability.

Lessons found in this unit are based upon competencies needed to be a livestock producer; however, they would be helpful to almost anyone in an agricultural occupation. They were adapted from the National Agricultural Occupations Competency Study. They are as follows:

1. General Preparation for Livestock Judging, Selection, and Evaluation
2. Judging, Selection, and Evaluation of Beef Cattle
3. Judging, Selection, and Evaluation of Swine
4. Judging, Selection, and Evaluation of Sheep
5. Giving Oral Reasons

DIRECTIONS

Each lesson listed is followed by: 1) a performance objective, 2) teaching-learning activities (including technical content), 3) supplementary materials (including transparency masters and lists of references), and 4) check-out activities. Since the knowledge that can be obtained in each of these lessons is necessary to be a successful livestock judge, and to a great extent for a livestock producer or anyone involved with agriculture, all the lessons should be taught unless local circumstances or previous learnings would cause this to be unnecessary. They do not necessarily need to be taught in the order listed. The transparency masters can also be copied and used for handouts the students can keep in their notebooks.

1. GENERAL PREPARATION FOR LIVESTOCK JUDGING, SELECTION, AND EVALUATION

1.1 Performance Objective

Given a written check-out activity concerning the importance of livestock judging, selection, and evaluation, each student will complete the activity with 80 percent accuracy.

1.2 Teaching-Learning Activities

a. This section on general preparation for livestock judging, selection, and evaluation can best be taught using the problem-solving procedure. Prepare appropriate problems for class use.

b. Obtain pictures, slides, models, or good animals for students to observe.

c. Take a field trip to see outstanding livestock.

d. Use a person who knows livestock judging as a resource person to explain the importance of livestock judging.

e. Make and use transparencies and/or handouts from transparency masters found at the end of this section under Supplementary Materials.

1.2.1 Identifying the skills needed for judging livestock. (See transparency master 1.2.1a.)

To have a well-rounded agricultural education, all students of agriculture should have some ability to judge livestock, whether they are in the livestock industry or not. Students who want to judge livestock should develop competence in the following areas:

a. A general knowledge of what to look for in market and breeding livestock.

b. A knowledge of anatomy and livestock terminology.

c. A knowledge of the characteristics desired by livestock producers and buyers.

d. An attitude of self-confidence, experience and skill in livestock judging.

e. An ability to point out an animal's weaknesses (including genetic defects) and strong points.

1.2.2 Selecting a good breed or breed cross.

No one breed is superior in all traits. Some important factors one should consider in selecting livestock are: (See transparency master 1.2.2a.)

a. Adaptability - In a country as large and variable as the United States, breeds must be selected to adapt to the enviromental conditions. Moreover, wide differences in environmental adaptations may exist within breeds, especially sheep.

b. Market demand - If buyers prefer a certain breed or breed cross, they will usually pay more for it. If there is a demand for carcasses at a certain weight, breeders should produce animals that will provide the weight carcass in demand.

c. Available breeding stock - Availability of good quality breeding stock should be a major consideration.

d. Prolificness and mothering ability - The ability to produce and nourish larger numbers of offspring should be considered.

e. Growth potential - Some animals grow faster than others, and preference should be given to them.

f. Carcass traits - Some animals have more desirable carcass characteristics with higher lean to fat ratios and superior quality.

g. Insect and parasite resistance - Some animals are more resistant to common insects and parasites than others.

h. Preference - Preference may be a factor in choosing a breed and will usually effect a person's attitude toward one's livestock. Since preference may have little effect on most of the other factors listed, it should be looked at carefully and critically before a decision is made.

While each of these factors can be significant, it can be said in summary that the three most important factors in selecting livestock are production, product, and reproduction.

1.2.3 Selecting good breeding animals.

a. The foundation of animal production resides in the breeding program. Effort, therefore, should be made to select those animals for use in the breeding herd or flock that possess:

(1) a long life with high reproductive efficiency;
(2) efficient conversion of feed into meat, wool fiber, or power;
(3) the potential for transmitting the most desirable production, carcass and reproductive traits to their progeny.

The ability of the individual animal to meet these requirements depends upon two factors: heredity and environment. (See transparency masters 1.2.3a and 1.2.3b.)

b. Today, our systems of production call for the use of records to help determine the genetic potential of an individual animal and its response to its environment. However, records cannot tell the complete story. Visual evaluation or live animal judging continues to be an important part in the selection of superior breeding stock.

c. The live animal displays many features that help predict its value to the breeding herd or flock. It takes continuous training of the eye and mind to detect and evaluate those features which determine the economic value of the animal.

1.2.4 Selecting good feeders.

a. Selecting the correct feeders can easily make the difference between profit and loss in any feeder operation. In selecting feeders, it is important to know what is being demanded in market animals in order to be able to select wisely.

b. Grades used for feeder cattle have left some confusion in buyers' minds, there fore, the USDA established new feeder cattle grades in 1979. A brief review of the new grades based on frame size and thickness follows:

The new standards replace present feeder cattle grades based on conformation and replace them with a dual-score system indicating frame size and thickness in cattle. Feeders are classified as being large, medium or small framed with a thickness of 1, 2, or 3.

A large framed steer would not be expected to reach choice quality grade until his live weight exceeded 1,200 pounds. A large frame heifer wouldn't be expected to grade choice until she weighed more than 1,000 pounds.

Medium frame cattle would be expected to grade choice at live weights of 1,000 to 1,200 pounds for steers and 850 to 1,000 pounds for heifers. Small framed steers should be expected to grade choice at less than 1,000 pounds and small framed heifers at less than 850.

In thickness scores, a No. 1 would be "thrifty and slightly thick throughout." A No. 2 would be "thrifty and narrow throughout." A No. 3 would be thrifty cattle not meeting No. 2 standards. About 87 percent of feeder cattle would fall under No. 1 standards; 12 percent would be No. 2's, and less than one percent would be 3's.

Cattle that are unhealthy or have structural defects, including cattle that are double muscled, are classified as "Inferior."

FRAME SIZE

THICKNESS

Normally, holstein steers would be expected to be large framed with a muscle thickness score of No. 2. Livestock market news began using these standards, effective September 1, 1979.

The new grading system also applies to stock cows for sale. However, frame size references for cows will be adjusted according to their maturity.

1.2.5 Developing a system for judging.

a. Judging requires sould reasoning; do not follow hunches.

b. Before placing a class, consider the following points:

(1) For what purpose is the class being evaluated?
(2) What are the outstanding characteristics which make the animal valuable for that purpose?
(3) How does the animal compare with the ideal?

c. Judge each class individually according to its purpose and not by some previous class. Evaluate each animal carefully. See the animals as they are and not as you would like to see them.

d. Make accurate observations. Accuracy is most important for correct placings and good reasons.

e. Analyze the class. If possible, divide the animals into groups--a top, bottom, and middle pair or two pairs.

f. Place the class by process of elimination. Make brief but accurate notations of each animal's desirable and undesirable points.

g. If you become confused, back off from the class and think. Ask yourself points (1), (2), and (3) under item b.

h. Go over the class again to see if your judgment is sound. Know that you can justify your placing with reasons before filling out your card.

i. Depend on your own judgment, not someone else's.

j. In judging any slaughter class, always consider the following points:

(1) Muscling - refers to the degree (length and thickness) of muscle as indicated by conformation or shape.
(2) Finish - refers to the amount and distribution of fat. Muscling and finish greatly affect market value because of their influence on yield of preferred cuts or cutability. Well muscled animals with a minimum of fat yield the highest percent of preferred cuts. Poorly muscled overfinished animals yield the lowest percentage; therefore, they have the lowest market value. Research shows that the negative effect of excess fat has about three times as much influence on cutability as the positive effect of muscling. Some fat is needed to give meat firmness and flavor; therefore, a preferred market animal has maximum muscle with just enough fat to give the desired quality to retail cuts.
(3) Dressing percentage - refers to the proportion of chilled carcass weight to the animal's slaughter live weight; it is determined by dividing the chilled carcass weight by the live weight x 100. Market animals having a high dressing percentage are worth more to the packer because they have a higher percentage of carcass. Dressing percentage is influenced by amount of "fill," degree of finish, weight of dress off items and muscling.

k. In judging breeding classes, always consider:

(1) Conformation - This is the shape or form which indicates the degree of muscling that makes an animal most desirable for production efficiency, breed requirements and current market demands.
(2) Weight for age - Animals should have proper skeletal size for their age, breed and sex. Adequate size and scale is important to the livestock producer because the ability to grow and gain rapidly is heritable and closely related to gain efficiency.
(3) Feet and legs - Soundness with adequate bone development is necessary for free and easy movement. Pay particular attention to shoulders, knees, hocks and pasterns. Usually minor weaknesses at a young age become more serious as the animal matures.
(4) Breed character - This refers to traits that distinguish one purebred from another, such as: color or color pattern; head shape; ear size, shape and carriage; polled or horned.

This section is adapted from Livestock Judging Suggestions.

1.3 Supplementary Materials

References: See books listed under List of Resources at back of unit.

Transparency Masters:
1. 1.2.1a, "Skills Needed to Judge Livestock."
2. 1.2.2a, "The Three Most Important Factors in Selecting Livestock."
3. 1.2.3a, "Heredity."
4. 1.2.3b, "Environment."

1.4 Check-Out Activities

Provide students with the following exercise:

1. List four skills needed in judging livestock.
2. Is adaptability a more important factor in beef, swine, or sheep?
3. Availability of good breeding stock is an important consideration in choosing a breed or breed cross. T F
4. List the three most important factors in selecting livestock.
5. List the two factors on which the new USDA feeder cattle grades are based.

ANSWERS:

1. a. A general knowledge of what to look for in market and breeding livestock.
   b. A knowledge of anatomy and livestock terminology.
   c. A knowledge of the characteristics desired by livestock producers and buyers.
   d. An attitude of self-confidence, experience and skill in livestock judging.
   e. An ability to point out an animal's weaknesses (including genetic defects) and strong points.
2. Sheep
3. True
4. a. Production
   b. Product
   c. Reproduction
5. a. Frame size
   b. Thickness

SKILLS NEEDED TO JUDGE LIVESTOCK

A GENERAL KNOWLEDGE OF WHAT TO LOOK FOR IN MARKET AND BREEDING LIVESTOCK.

A KNOWLEDGE OF ANATOMY AND LIVESTOCK TERMINOLOGY.

A KNOWLEDGE OF THE CHARACTERISTICS DESIRED BY LIVESTOCK PRODUCERS AND BUYERS.

AN ATTITUDE OF SELF CONFIDENCE, EXPERIENCE AND SKILL IN LIVESTOCK JUDGING.

AN ABILITY TO POINT OUT AN ANIMAL'S WEAKNESSES (INCLUDING GENETIC DEFECTS) AND STRONG POINTS.

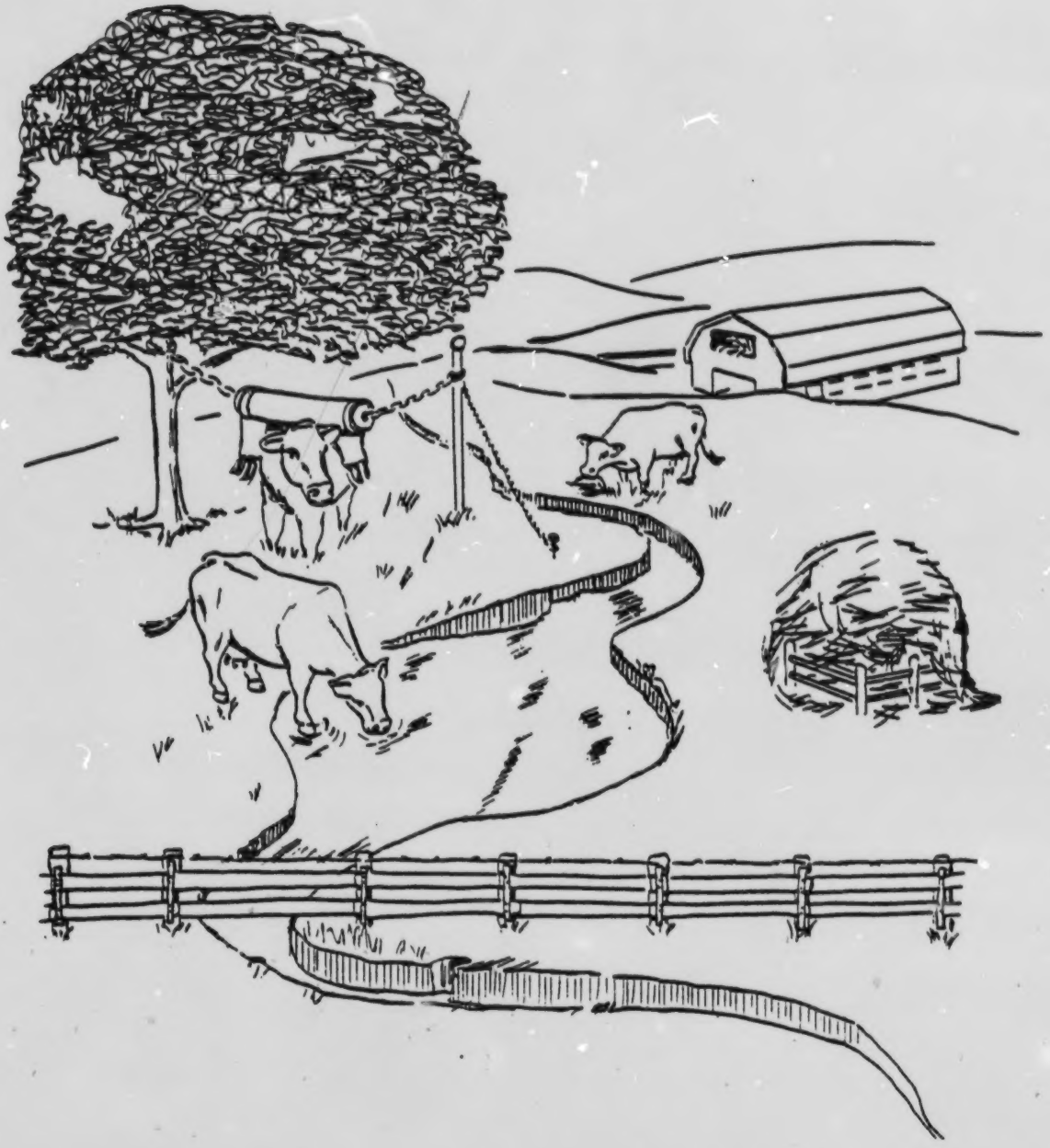
THE THREE MOST IMPORTANT FACTORS IN SELECTING LIVESTOCK

1. PRODUCTION
2. PRODUCT
3. REPRODUCTION

HEREDITY

PASSED AT TIME OF FERTILIZATION AND CANNOT BE CHANGED

ENVIRONMENT



ENVIRONMENTAL FACTORS SUCH AS WEATHER, NUTRITION, SANITATION, HOUSING, ETC., CAN SUPPRESS OR BRING OUT THE INHERITED POTENTIAL OF LIVESTOCK.

ENVIRONMENT

ENVIRONMENTAL FACTORS SUCH AS WEATHER, NUTRITION, SANITATION, HOUSING, ETC., CAN SUPPRESS OR BRING OUT THE INHERITED POTENTIAL OF LIVESTOCK.

2. JUDGING, SELECTION, AND EVALUATION OF BEEF CATTLE

2.1 Performance Objective

a. Given a written check-out activity concerning judging, selection, and evaluation of beef cattle, each student will complete the activity with 80 percent accuracy.

b. Given classes of four market or breeding beef animals (while live animals are preferred, slides or pictures may be used), have students place classes. Each student must score at least 40 out of 50 possible points.

2.2 Teaching-Learning Activities

a. This section on judging, selection, and evaluation of beef cattle can best be taught using the problem-solving procedure. Prepare appropriate problems for class use.

b. Obtain pictures, slides, models, or beef animals for students to observe and practice placing.

c. Take a field trip to judge beef animals.

d. Use a person knowledgeable about judging beef animals to help explain beef judging terminology and to point out strong and weak characteristics of beef animals.

e. Make and use transparencies and/or handouts from transparency masters at the end of this section.

f. Order and use materials listed under List of Resources at the end of the unit.

2.2.1 Learning parts of a beef animal. (See transparency masters 2.2.1a, 2.2.1b, 2.2.1c and 2.2.1d.)

Students must know the parts of a beef animal before they can learn what is important about different parts. A knowledge of livestock and carcass terminology is necessary in order to give reasons for placing a class.

2.2.2 Selecting the ideal type of beef animal.

To judge (evaluate) beef cattle, you must first develop a "mental image" of the ideal type of beef animal. (See transparency masters 2.2.2a, 2.2.2b, 2.2.2c, 2.2.2d, 2.2.2e, 2.2.2f, 2.2.2g, 2.2.2h, 2.2.2i, 2.2.2j, and 2.2.2k.) While there are many characteristics that are the same for market and breeding animals, there are some differences. Each will be presented separately even though there will be considerable overlapping.

2.2.3 Judging beef market animals. (See transparency master 2.2.3a.)

a. There are many ways that beef animals can be judged, and numerous scorecards have been devised to help arrive at a final conclusion. The basic idea in judging beef animals, as pointed out in the previous section, is to have a meaty animal, one that is not wasty but has high percentage of high priced cuts. The two major things that are evaluated in market animals are "conformation" and "finish." Conformation is considered more important and is given a little less than two-thirds of the total score in judging. Finish comprises a little less than one-third of the total score. Another area that is receiving more attention is "cutability."

b. "Finish" is a term used to express the degree of fatness of an animal. Under-finished and over-finished cattle are less valuable than correctly-finished cattle. Finish can be estimated by observation and handling. But, you must learn what is desirable or ideal first.

Correctly-finished cattle are trim, not wasty. They have trim briskets and a curvature over the top--not flat. They look firm, not soft. Upon handling, correctly-finished cattle are firm to the touch. The backbone and ribs are covered with just enough fat to make them smooth. You should be able to feel the backbone and ribs with slight hand pressure. The loin is full and smoothly covered. Cattle that are very deep in the fore and rear flank and very full in the brisket, twist and cod (steers) are likely overfat.

c. "Conformation" is the term used to describe the body form, physical characteristics or appearance of an animal. Concepts of ideal beef conformation have changed and will likely continue to change as more study is given to correlating live and carcass evaluation.

The conformation of an ideal market beef animal today may be described as follows: muscular; long, thick, deep rounds; moderate depth of body, but a trim middle; intermediate length of leg; good length of body (especially loin and rump); good size and straightness of topline; slightly wedge-shaped (wider and thicker behind than in front).

Finish contributes much to apparent good conformation. Train yourself to evaluate finish first, and you'll make fewer errors evaluating conformation. You must have instruction to train your eyes and hands to determine true conformation and muscling. Live animals must be used. And, if possible, you should see and evaluate the carcasses from the same cattle.

d. "Cutability" is a term used to indicate the proportion or percentage meat that can be sold from a carcass. A high cutability live steer is one that is trim and meaty, the kind that will produce a carcass with a high proportion of saleable meat in relation to waste, fat and bone.

Cutability is sometimes expressed as yield grade. Official USDA grades are designated as 1-2-3-4-5, with 1 being the top, 3 being average and 5 undesirable--very fat and wasty. Do not confuse or use "yield," or dressing percentage, and "yield grade" interchangeably.

e. Yield or dressing percentage is the yield of dressed carcass. Dressing percentage is improved by increased finish. Increased finish or fat will lower cutability or yield grade. Most important is the cutability or yield grade. Yield grade correlates to the amount of final product that is purchased. Thus, yield grades have become more important and dressing percentage less important in determining the value of the animal.

Parts of this section taken from Judging Market Beef Cattle: Guide for Beginning Judges.

2.2.4 Judging beef breeding animals. (See transparency masters 2.2.4a and 2.2.4b.)

a. While some of the general characteristics looked for in market animals are similar to breeding animals, the biggest differences are that conformation is even more important--comprising about three-fourths of the total score. Finish becomes less important and breeding qualities and sex characteristics make up nearly a quarter of the points. In actual selection as compared to judging of beef animals, performance is very important.

b. In looking at conformation, it may be helpful to break it down into general appearance, hindquarter, and front quarter. The first two are much more important than the last one.

(1) General appearance is largely based on size, scale, structure, soundness, and type; more specifically, look for such things as: large for age, large frame, heavy bone, more body mass, correct length and height of body, correct length of leg, larger heart girth, wider chest, greater body capacity, soundness, free and easy movement, strong top, and correct set to legs.
(2) In finish or condition of breeding bulls and heifers, look for: less predisposition to waste and less excess fat along underline and in udder or scrotum; trimmer, less wasty brisket and rear flanks; uniformity of finish; and desirable fleshing qualities.
(3) Breeding and sex characteristics can best be looked at separately for bulls and heifers and cows.

(a) In bulls, look for masculinity about head and neck, heavy jaw and crest, well developed testes, tighter sheath, correct length of leg, and a functional reproductive system.

(b) In heifers and cows, look for more refinement; femininity about head and neck; longer, leaner neck; smaller jaw; smooth shoulder; strong udder attachment, with better balanced and productive udder with smaller, more correct teats; and a well-developed vulva.

c. Some of the things that are desired in performance are high weight gain per day of age or more weight at a younger age, which can also be called superior growth rate; efficient feed utilization or less feed per pound of gain; and yield of higher priced retail cuts.

2.3 Supplementary Materials

References:
1. Animal Science and Industry Laboratory Manual
2. Judging Market Beef Cattle: Guide for Beginning Judges.
3. Live Animal Carcass and Selection Manual.
4. Livestock Judging, Selection, and Evaluation.
5. Livestock Judging Suggestions, MF 704.

Transparency Masters:
1. 2.2.1a, "Parts of a Beef Animal."
2. 2.2.1b, "Major Parts of a Beef Animal (Side View)."
3. 2.2.1c, "Major Parts of a Beef Animal (Top View)."
4. 2.2.1d, "Major Parts of a Beef Animal (Front View)."
5. 2.2.2a, "Side View of Beef Animals."
6. 2.2.2b, "Description of Side View of Beef Animals."
7. 2.2.2c, "Front View of Beef Animals."
8. 2.2.2d, "Description of Front View of Beef Animals."
9. 2.2.2e, "Top View of Beef Animals."
10. 2.2.2f, "Description of Top View of Beef Animals."
11. 2.2.2g, "Rear View of Beef Animals."
12. 2.2.2h, "Description of Rear View of Beef Animals."

13. 2.2.2i, "'Sickle-Hocked' Beef Animal."

14. 2.2.2j, "Natural 'Set' to Feet and Legs of Beef Animal."

15. 2.2.2k, "'Post-Legged' Beef Animal."

16. 2.2.3a, "Characteristics of the Ideal Market Steer."

17. 2.2.4a, "Characteristics of the Ideal Breeding Bull."

18. 2.2.4b, "Characteristics of the Ideal Breeding Heifer."

19. 2.4a, "Test on Major Parts of a Beef Animal (Side View)."

2.4 Check-Out Activities

a. Provide students with the following exercise:

1. Name the ten parts of a beef animal shown on transparency master 2.4a.

2. To judge beef cattle, you must first develop a "mental image" of the ideal type of beef animal. T F

3. The most important characteristic in both breeding and market animal judging is finish. T F

4. Yield grade and dressing percentage are the same thing. T F

5. Size compared to age of breeding animals is important. T F

6. In looking at conformation, general appearance and hindquarters are very important. T F

7. Breed and sex characteristics are not important in breeding stock. T F

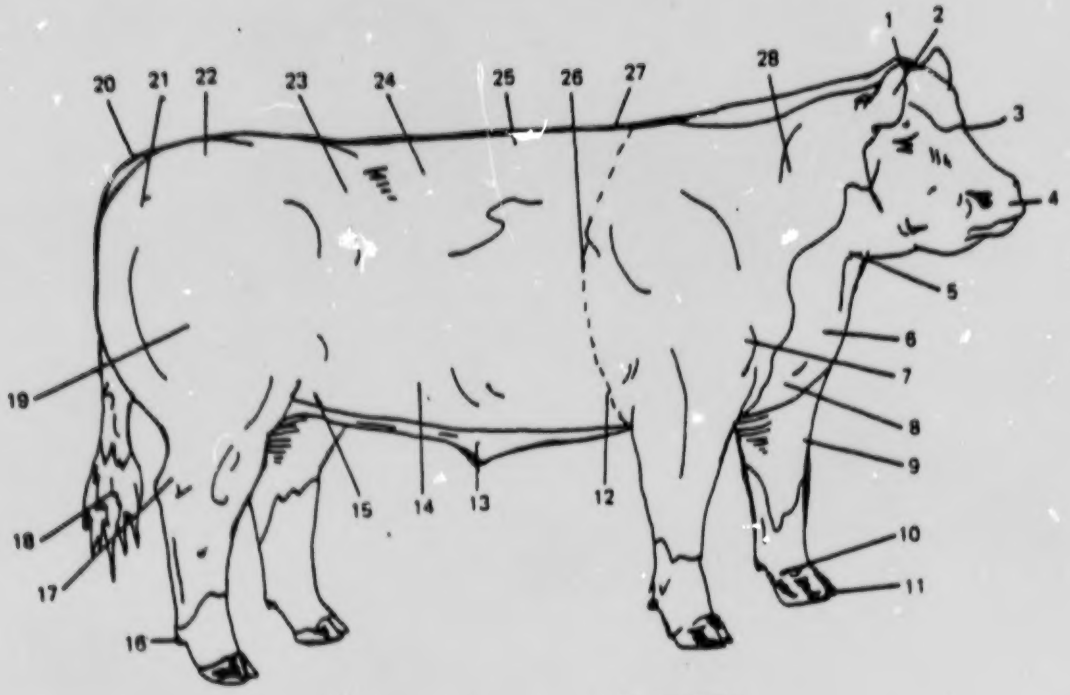
ANSWERS:

1. a. Throat
   b. Brisket
   c. Forearm
   d. Substance of bone
   e. Middle
   f. Rear Flank
   g. Leg
   h. Rear quarter
   i. Tail head
   j. Top line

2. True
3. False
4. False
5. True
6. True
7. False

b. Provide students with classes of beef animals and have them place each class of beef animals. While live animals are preferred, slides or pictures may be used. Use predetermined scoring of classes to rate students. Students who do not average 40 out of 50 points should be given further instruction and practice.

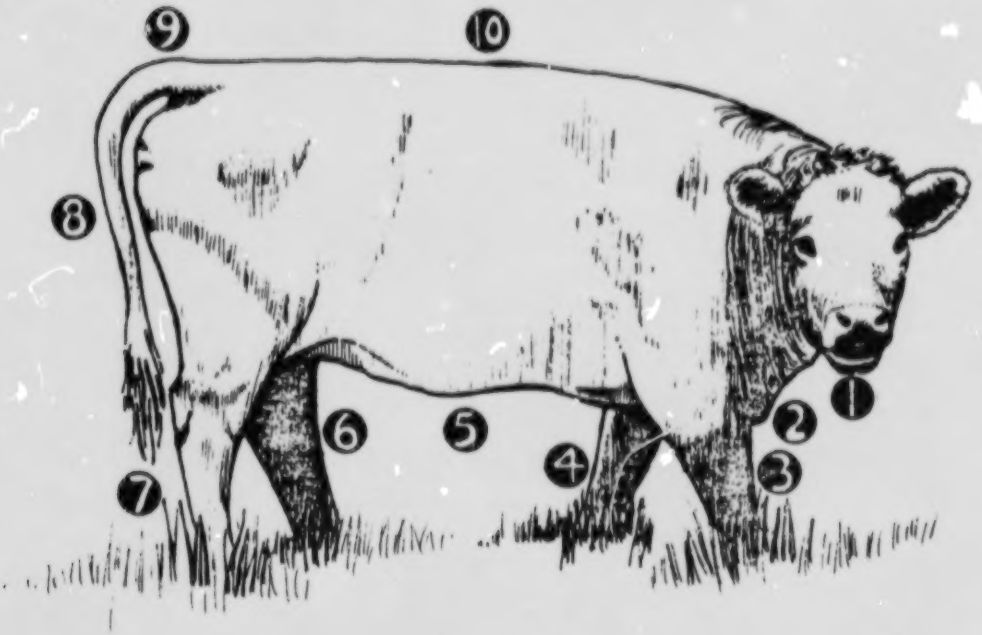
PARTS OF A BEEF ANIMAL



1. poll
2. ear
3. face
4. muzzle
5. throat
6. dewlap
7. point of shoulder
8. brisket
9. knee
10. pastern
11. hoof
12. heart girth
13. sheath
14. belly or middle
15. rear flank
16. dew claw
17. hock
18. switch
19. quarter or round
20. tail-head
21. pins
22. rump
23. hooks
24. loin
25. back
26. ribs
27. crops
28. neck

Source: Animal Science and Industry Manual.

MAJOR PARTS OF A BEEF ANIMAL (SIDE VIEW)



1. THROAT
2. BRISKET
3. FOREARM
4. SUBSTANCE OF BONE
5. MIDDLE
6. REAR FLANK
7. LEG
8. REAR QUARTER
9. TAIL HEAD
10. TOP LINE

F. GILMORE, MST. MATL. LAB. UK. 742-4

MAJOR PARTS OF A BEEF ANIMAL (TOP VIEW)

1 SHOULDER

2 HEART GIRTH *or* FORERIB

smoothness in these areas is a result of finish.....

3 SPRING IN REAR RIBS

4 HOOKS *set forward as far as possible*

5 LENGTH OF RUMP *from hook to pin bones*

R. GILMORE. INST MATL LAB. UK 742-1

MAJOR PARTS OF A BEEF ANIMAL (FRONT VIEW)

1. SHOULDER
2. FOREARM

} MUSCLE INDICATION

3. CANNON BONE – BONE SIZE
4. BRISKET – FINISH

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SIDE VIEW OF BEEF ANIMALS

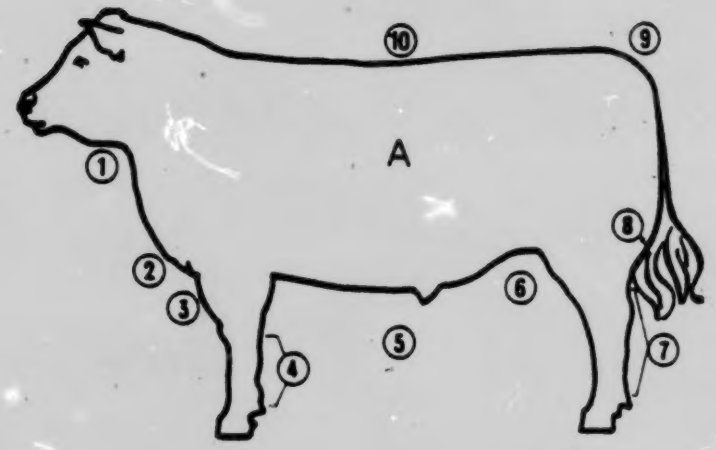
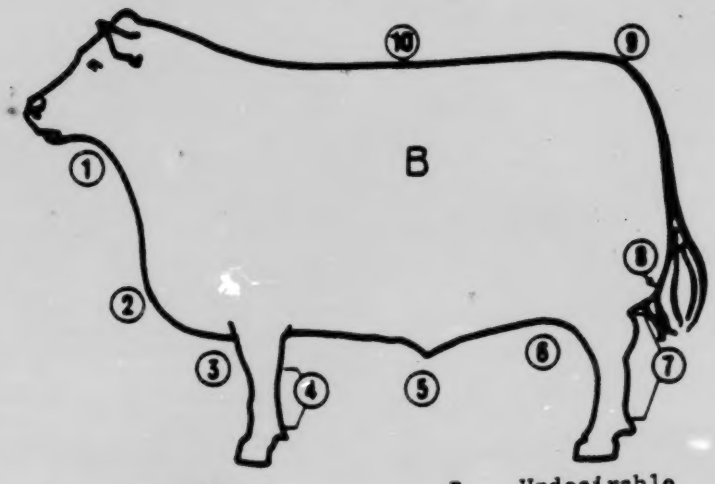


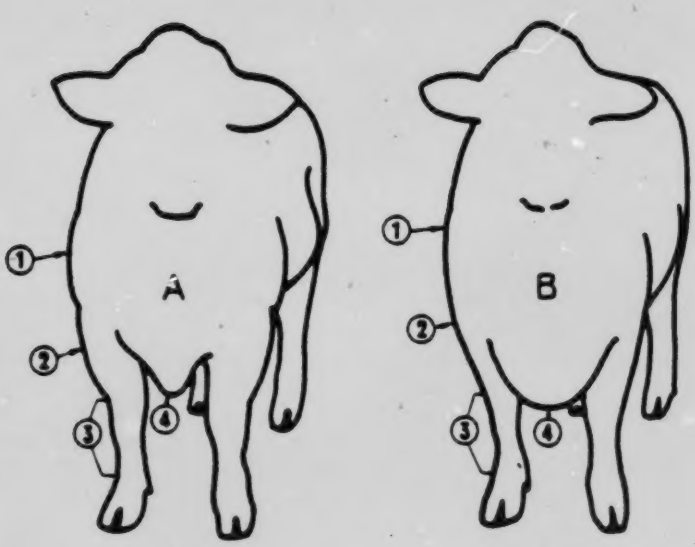
Fig. 1-9 Side view. (Courtesy, Purdue University)



A Desirable B Undesirable

Source: Purdue University.

FRONT VIEW OF BEEF ANIMALS



DESIRABLE UNDESIRABLE

Source: Purdue University.

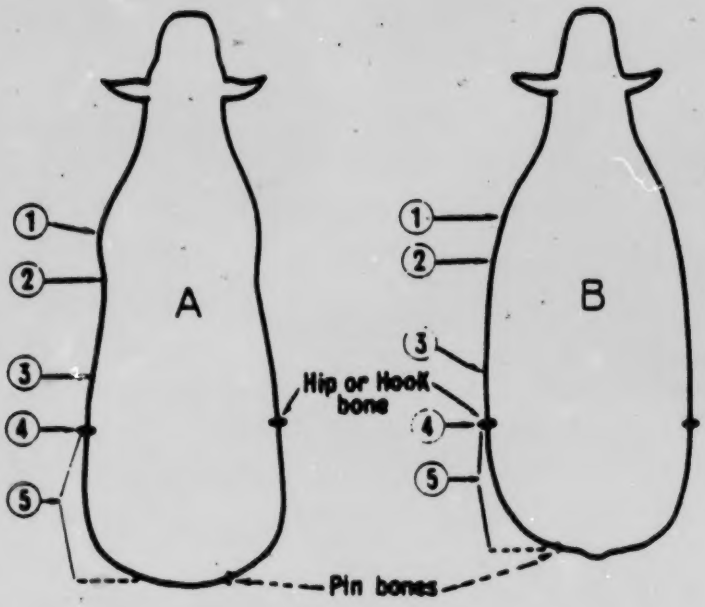
DESCRIPTION OF SIDE VIEW OF BEEF ANIMALS

No.	Part or Area	A (Desirable)	B (Undesirable)
1	Throat area	Clean	Excessive finish
2	Brisket & Dewlap	Clean & neat	Full & heavy
3	Forearm area	Good muscle development	Lack of muscle development
4	Cannon Bone area	Substance of bone	Average or less than average bone size
5	Middle	Clean & neat	Deep side, excess weight and flab
6	Rear Flank	May tuck up	Excess waste & flab
7	Hind Leg	Straight	Slightly curved
8	Rear Quarter	Not extremely deep or bulging	Deep, bulging
9	Tail Head	Not so smooth	Neat & smooth
10	Top Line	Long, straight	Slightly weak, short

DESCRIPTION OF FRONT VIEW OF BEEF ANIMALS

No.	Part or Area	A (Desirable)	B (Undesirable)
1	Shoulder	Muscle development	Lacks muscle development
2	Forearm	Muscle development	Lacks muscle development
3	Cannon Bone area	Good bone size & substance	Smaller bone size
4	Brisket or Dewlap	Clean and trim	Full and heavy

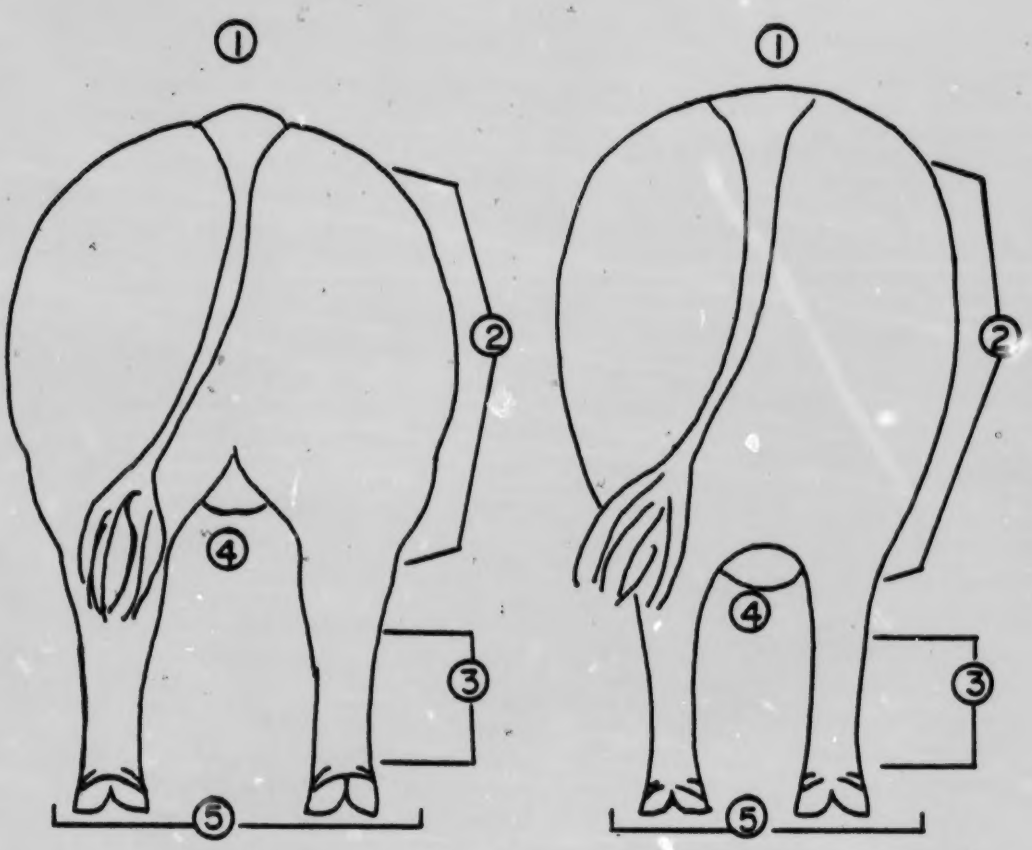
TOP VIEW OF BEEF ANIMALS



DESIRABLE UNDESIRABLE

Source: Purdue University.

REAR VIEW OF BEEF ANIMALS



DESIRABLE

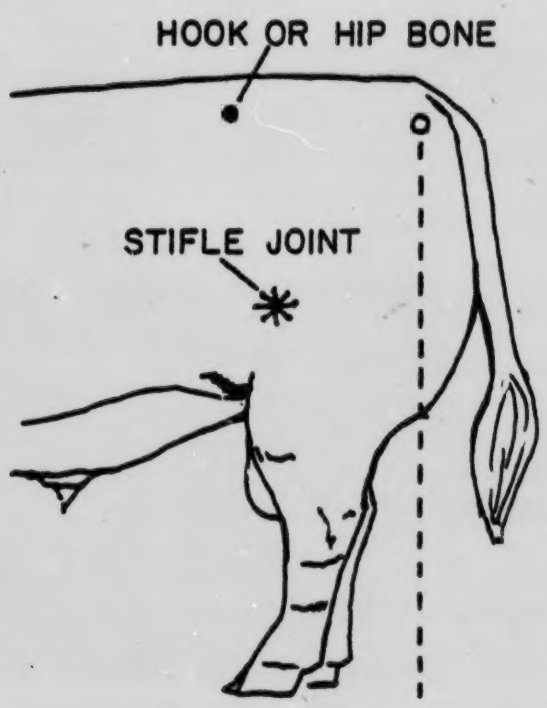
UNDESIRABLE

Source: Purdue University.

DESCRIPTION OF REAR VIEW OF BEEF ANIMALS

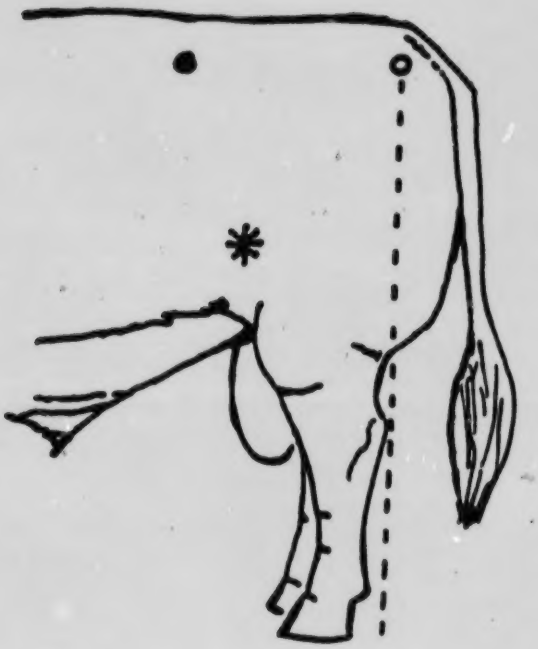
No.	Part or Area	A (Desirable)	B (Undesirable)
1	Tail head	Slightly rough	Countersunk, smooth
2	Rear quarter	Extreme muscle development	Lacks muscle development
3	Legs	Heavy bone, straight	Average bone size
4	Twist and cod area	"Cut up", lacks depth	Deep, full
5	Feet	Set wide	Set close together

"SICKLE-HOCKED" BEEF ANIMAL



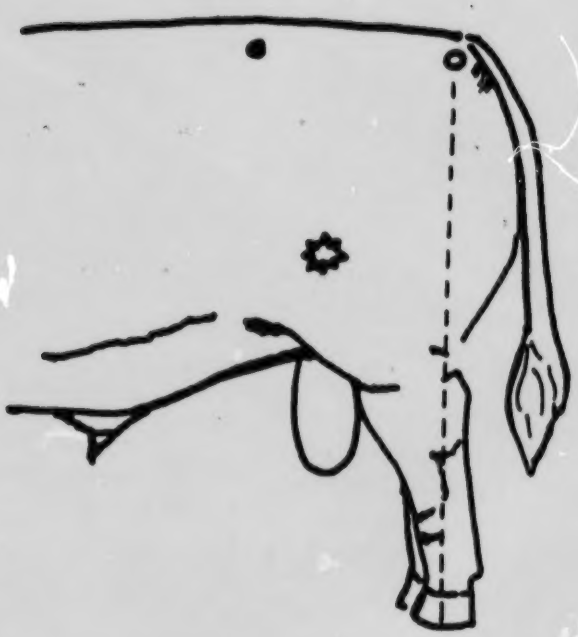
Source: Purdue University.

NATURAL "SET" TO FEET AND LEGS OF BEEF ANIMAL



Source: Purdue University.

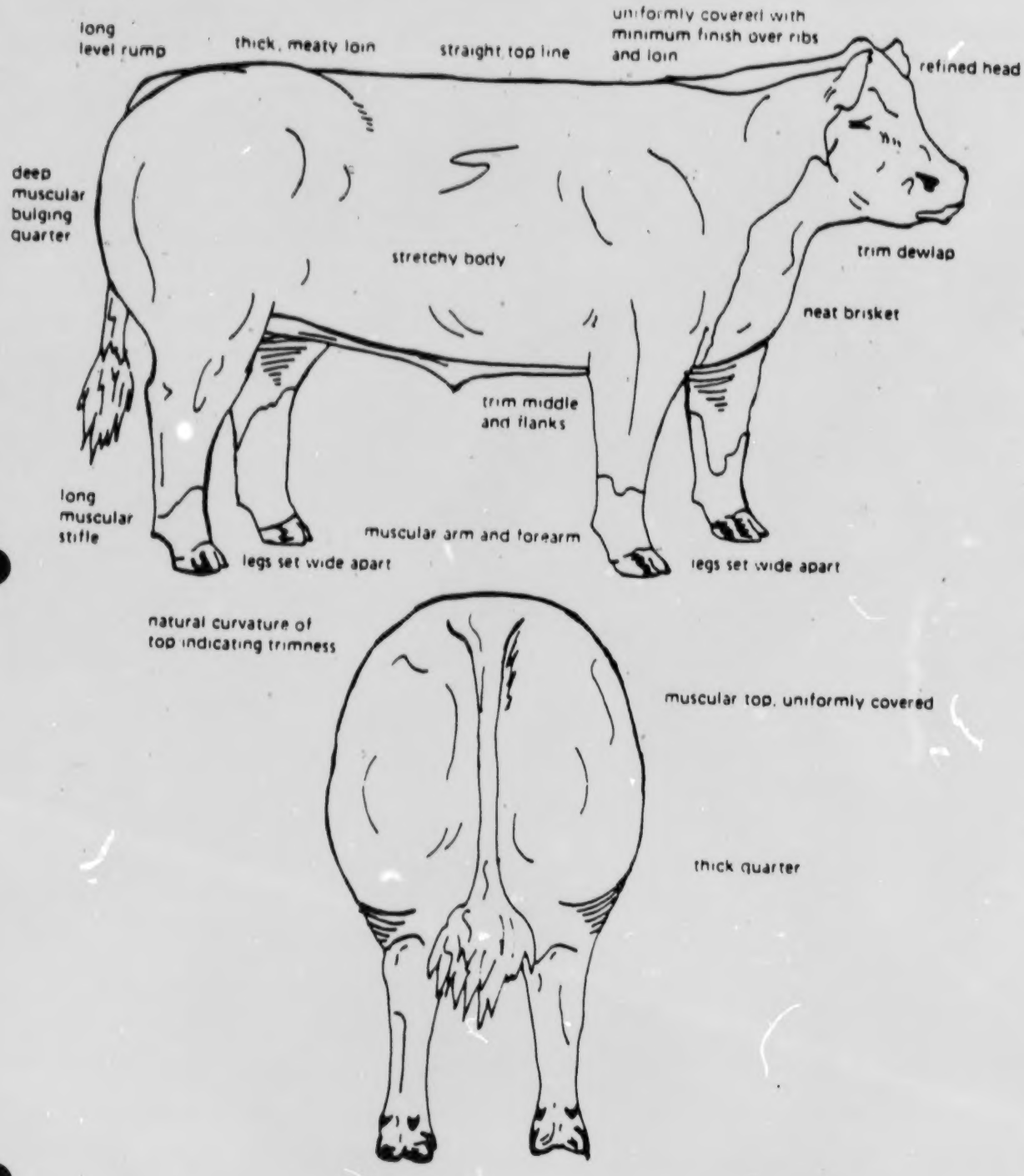
"POST LEGGED" BEEF ANIMAL



Source: Purdue University.

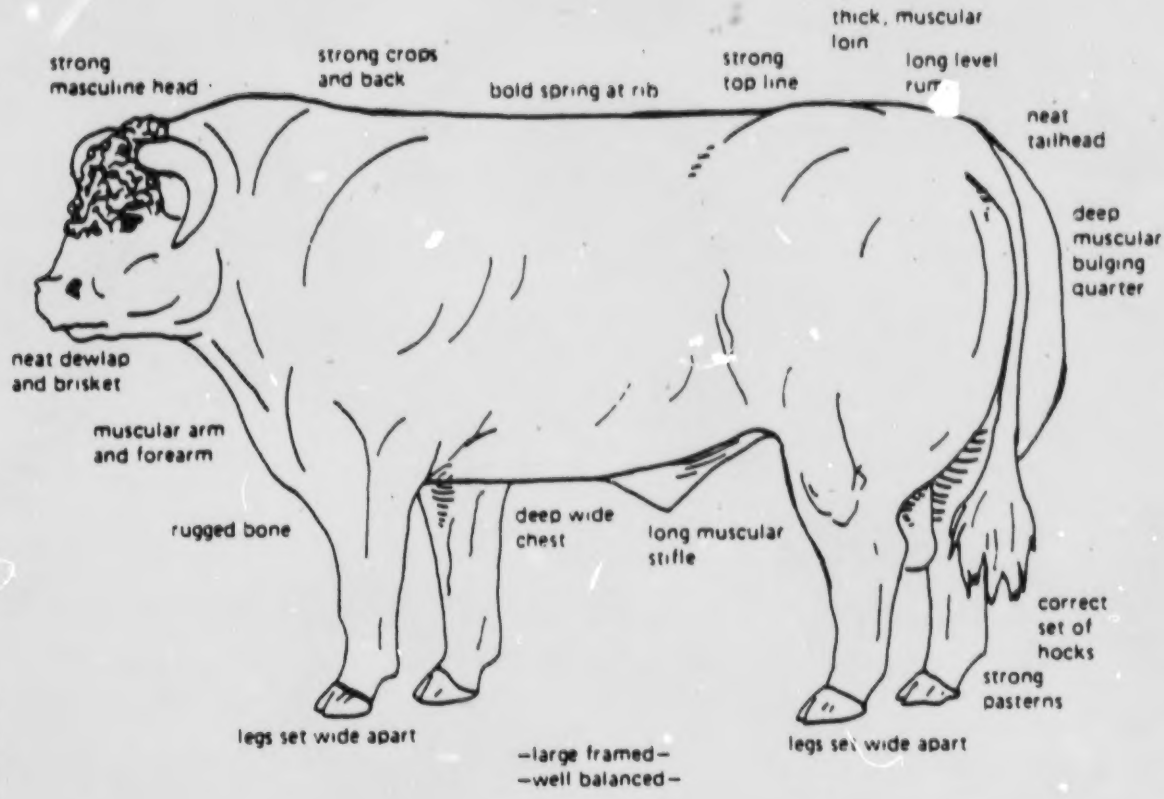
TM 2.2.3a

CHARACTERISTICS OF THE IDEAL MARKET STEER



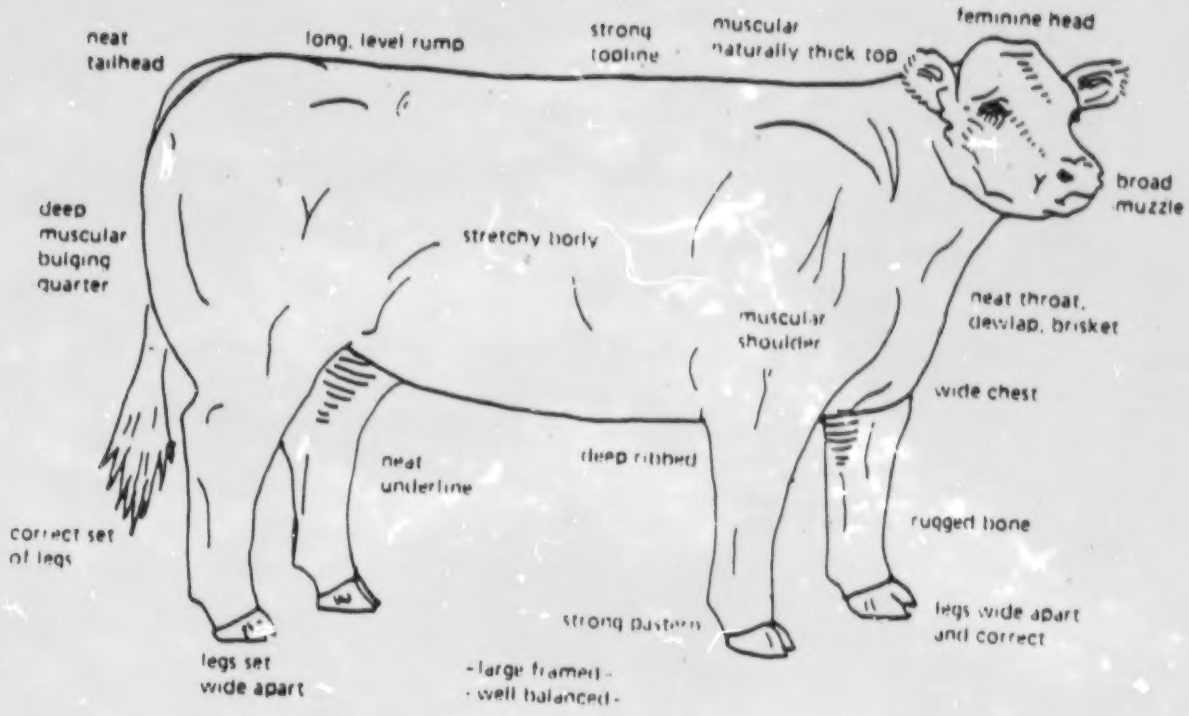
Source: Animal Science and Industry Manual.

CHARACTERISTICS OF THE IDEAL BREEDING BULL



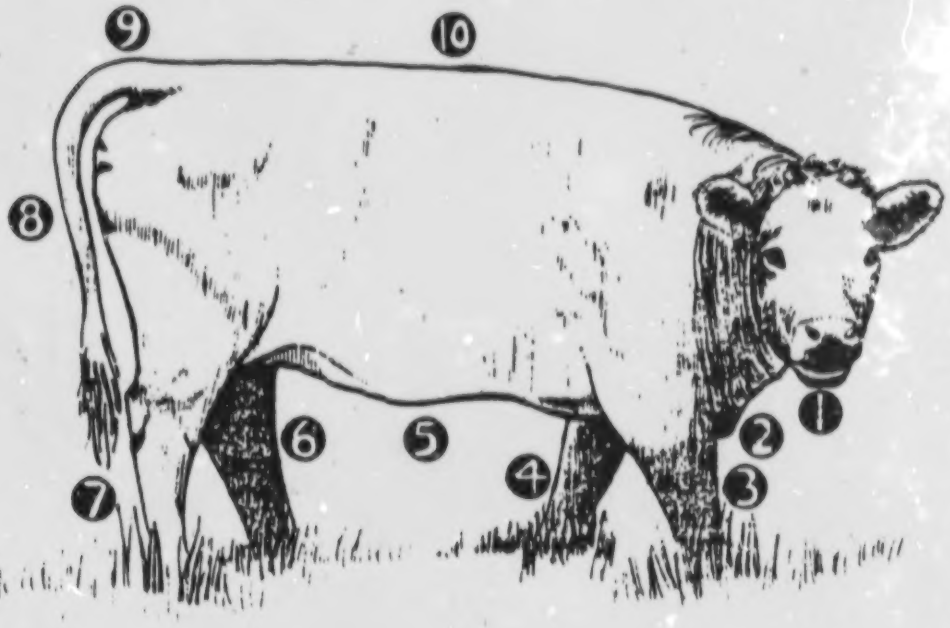
Source: Animal Science and Industry Laboratory Manual.

CHARACTERISTICS OF THE IDEAL BREEDING HEIFER



Source: Animal Science and Industry Laboratory Manual.

TEST ON MAJOR PARTS OF A BEEF ANIMAL (SIDE VIEW)



1. _____
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10. _____

3. JUDGING, SELECTION, AND EVALUATION OF SWINE

3.1 Performance Objective

a. Given a written check-out activity concerning judging, selection and evaluation of swine, each student must complete the activity with 80 percent accuracy.

b. Given classes of four market or breeding hogs (while live animals are preferred, slides or pictures may be used), have students place classes. Each student must score at least 40 out of 50 possible points.

3.2 Teaching-Learning Activities

a. This section on judging, selection, and evaluation of swine can best be taught using the problem-solving procedure. Prepare appropriate problems for class use.

b. Obtain pictures, slides, models, or hogs for students to observe and practice placing.

c. Take a field trip to judge hogs.

d. Use a person knowledgeable about judging hogs to help explain hog judging terminology and to point out strong and weak characteristics of hogs.

e. Make and use transparencies and/or handouts from transparency masters at the end of this section.

f. Order and use materials listed under List of Resources at the end of the unit.

3.2.1 Learning the parts of hogs. (See transparency masters 3.2.1a and 3.2.1b.)

Students must know the parts of a hog before they can learn what is important about different parts. A knowledge of swine and carcass terminology is necessary in order to give reasons for placing a class.

3.2.2 Selecting the ideal type of hog.

To judge (evaluate) hogs, you must first develop a "mental image" of the ideal type of hog. (See transparency masters 3.2.2a, 3.2.2b, 3.2.2c, 3.2.2d, 3.2.2e, 3.2.2f, 3.2.2g, and 3.2.2h.) The ideal market hog weighs about 220 pounds or is within 25 pounds of that weight. To meet meat-type hog certification standards, a hog must be at least 29.5 inches in length, have less than 1.5 inches of backfat, and have greater than 4.5 square inches of loin eye area.

To meet these criteria, the animal will be like Animal A in the transparencies for this section.

It is important to select both breeding and market hogs that do not show symptoms of PSS (Porcine Stress Syndrome). This condition in the live hog usually produces pale, soft, watery meat. Where there are many characteristics that are the same for market and breeding animals, there are some differences, so each will be presented separately even though there will be considerable overlapping.

3.2.3 Judging swine market animals. (See transparency masters 3.2.3a, 3.2.3b, and 3.2.3c.)

a. There are many ways that hogs can be judged and numerous score cards have been devised to help arrive at a final conclusion. The basic idea in judging beef animals, as pointed out in the previous section, is to have a well muscled, meaty animal that is not wasty and which has a high percentage of high priced cuts. The two major things looked at in judging market hogs are conformation and finish. Conformation is considered more important and is given a little less than two-thirds of the total score in judging. Finish is also very important and is given a little over one-third of the total score.

b. The major factor influencing the prive per pound of a live pig is dressing percentage. The normal dressing percentage is 72 percent, but it ranges from 65 to 80 percent. The major factors that influence the value of the carcass are the yield of lean cuts, amount of backfat, and degree of muscling. These factors relate very closely to conformation and finish.

c. Yield of lean cuts.

The lean cuts are the loin, ham, butt, and picnic. Yield of lean cuts is usually expressed as their percentage of live weight. Market swine will range from 32 to 48 percent lean cuts. Therefore, a 220-pound pig on foot with 45 percent lean cut yield would have 99 pounds ham, loin, butt, and picnic. Meaty pigs yield 40 percent lean cuts or more.

Estimates of lean cut yield on the live pig are made by considering dressing percentage, muscling, and backfat thickness. A firm, trim middled, well muscled pig will yield more lean cuts than a sloppy, soft, heavy middled, fat pig. A poorly muscled pig that is narrow over the top and that has long, flat tapering hams is known as a "meatless" pig and will often give a poor yield of lean cuts.

d. Correctness of finish.

Correctly finished pigs will have less than 1.3 inches of backfat at an average weight of 220 pounds. The backfat measurement on the carcass is the average of three measurements taken opposite the first rib, the last rib, and the last lumbar vertebra.

Probe measurements of the live pig give an accurage backfat measurement, but in judging you must learn to approach the accuracy of the probe by using visual indicators. Some of these are: width and turn over the top; firmness of the lower ham, crotch, and lower shoulder; general trimness of middle and jowl; and prominence of tail setting. Use live probe measurements to check on your accuracy and to aid you in improving your estimates.

e. Muscling and loin eye area.

A well muscled hog is relatively wide over the back, loin, and rump with a "turn" over the top as viewed from behind. The ham is firm and thick. The pig has good width of chest and shoulders, but is slightly wider in the rear (loin and ham) than in front.

A hog can be wide over the top by having a meaty large loin muscle or heavy backfat cover. The challenge is to accurately determine which. Loin eyes of 4.5 or more square inches are desired.

f. Length in the live hog is estimated by determining an imaginary center point of the ham, then estimating length to the fore part of the shoulder. This measurement approximates the carcass measurement for length, which is taken from the aitch bone in the pelvic region to the front edge of the first rib.

Pigs of 29.5 inches in length at 220 pounds are acceptable. Some will be shorter and some much longer. Credit need not be given for extreme length, but shorter pigs are often criticized. A meat-type pig is usually medium in length, has good arch of back, a smooth side, and a trim, tight underline.

Parts of this section were taken from Judging Market Hogs: Guide for Beginning 4-H Members.

3.2.4 Judging breeding hogs. (See transparency master 3.2.4a.)

a. While some of the general characteristics looked for in market hogs are similar to breeding hogs, the biggest differences are that general appearance accounts for one-fourth of the total score, conformation a little less than half of the total score, and breeding qualities a little less than one-third of the total score. Finish is less important than in breeding animals.

b. General appearance can be divided about equally into size and type. In looking at size, the animal should have good size and scale for age. In type, the hog should have heavy muscling, be firm and trim, long-bodied, and be highly developed in the rear quarter just as in market hogs.

c. In conformation, the rear quarters are the most important with ham and loin the highest scoring areas in that quarter. On the front quarter, the back is most important. About five percent of the total score is left for the middle.

d. In breeding characteristics, underpinnings and mammary systems are considered to be about equally important. About five percent of the total score is based on breed character.

3.3 Supplementary Materials

References:
1. Animal Science and Industry Laboratory Manual.
2. Judging Market Beef Cattle: Guide for Beginning Judges.
3. Live Animal Carcass and Selection Manual.
4. Livestock Judging, Selection, and Evaluation.
5. Livestock Judging Suggestions, MP 704.

Transparency Masters:
1. 3.2.1a, "Parts of a Hog."
2. 3.2.1b, "Major Parts of a Hog (Side View."
3. 3.2.2a, "Side View of Swine."
4. 3.2.2b, "Description of Side View of Swine."
5. 3.2.2c, "Front View of Swine."
6. 3.2.2d, "Description of Front View of Swine."
7. 3.2.2e, "Top View of Swine."
8. 3.2.2f, "Description of Top View of Swine."
9. 3.2.2g, "Rear View of Swine."
10. 3.2.2h, "Description of Rear View of Swine."
11. 3.2.3a, "Ideal Market Hog."
12. 3.2.3b, "Overfinished Market Hog."
13. 3.2.3c, "Meatless Type Hog."
14. 3.2.4a, "Breeding Gilts."
15. 3.4a, "Test on Major Parts of a Hog (Side View."

3.4 Check-Out Activities

a. Provide students with the following exercise:

1. Name the nine major parts of hogs. (See transparency master 3.2.1a.)

2. The ideal market hog weighs about 220 pounds plus or minus 25 pounds. T F

3. There is little similarity between ideal market and breeding hogs. T F

4. The major factors that influence the value of a hog carcass are yield of lean cuts, amount of backfat, and degree of muscling. T F

5. A good yield of lean cuts is 30 percent. T F

6. Lean cuts are the loin, ham, butt, and picnic. T F

7. Correctly finished pigs will have less than 1.3 inches of backfat at an average weight of 220 pounds. T F

8. Pigs 29.5 inches in length at 220 pounds are acceptable. T F

9. Finish is more important in breeding hogs than in market hogs. T F

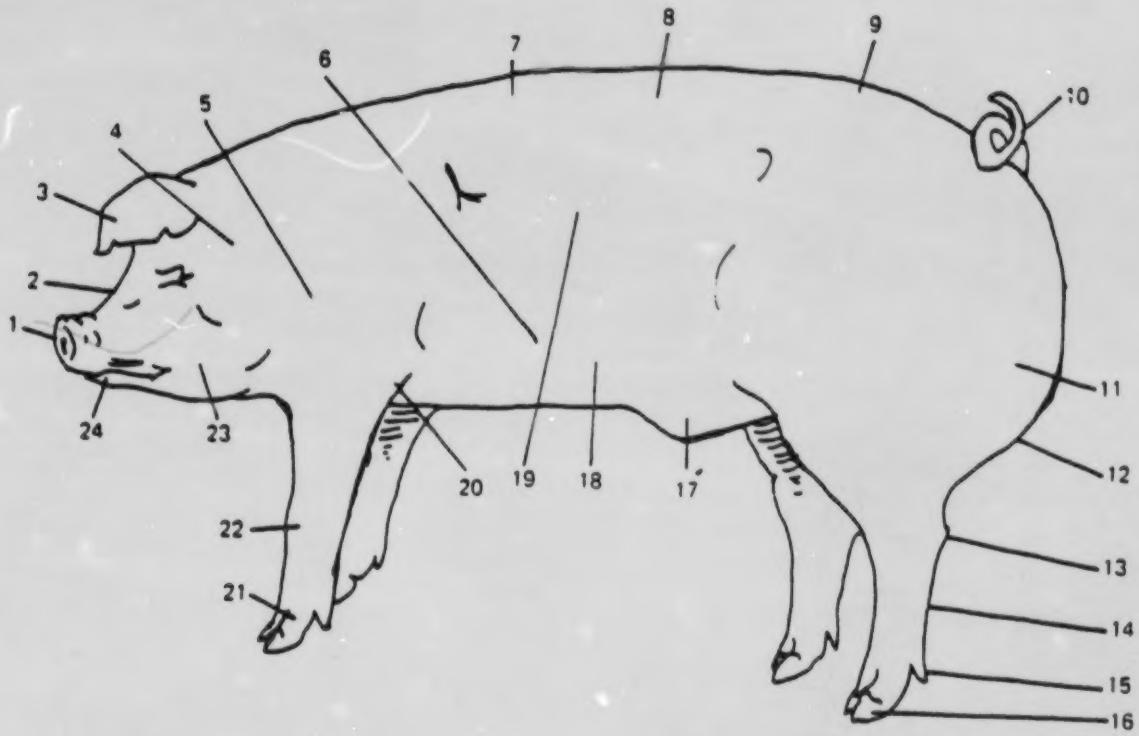
10. In judging conformation, the front quarters are more important than rear quarters. T F

ANSWERS:

1. a. Jowl
   b. Shoulder
   c. Back
   d. Loin
   e. Rump
   f. Ham
   g. Side
   h. Belly
   i. Rear flank
2. True
3. False
4. True
5. False
6. True
7. True
8. True
9. False
10. False

b. Provide students with classes of hogs and have students place each class of hogs. Use predetermined scoring of classes to rate students. Students that do not average 40 out of 50 points should be given further instruction and practice.

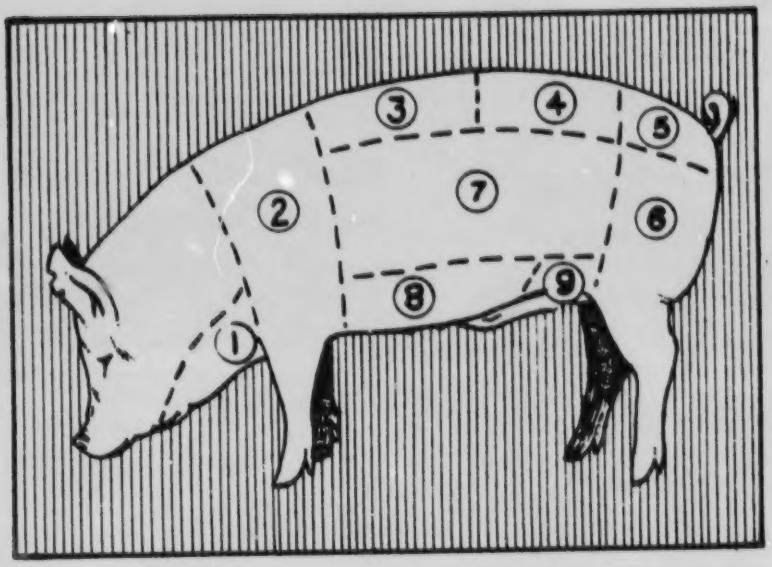
PARTS OF A HOG



1. snout
2. face
3. ear
4. neck
5. shoulder
6. ribs
7. back
8. loin
9. rump
10. tail
11. ham
12. cushion of ham
13. hock
14. cannon
15. dewclaw
16. toe
17. sheath
18. belly
19. side
20. elbow
21. pastern
22. knee
23. jowl
24. mouth

Source: Animal Science and Industry Laboratory Manual.

MAJOR PARTS OF A HOG (SIDE VIEW)



1. Jowl
2. Shoulder
3. Back
4. Loin
5. Rump
6. Ham
7. Side
8. Belly
9. Rear Flank

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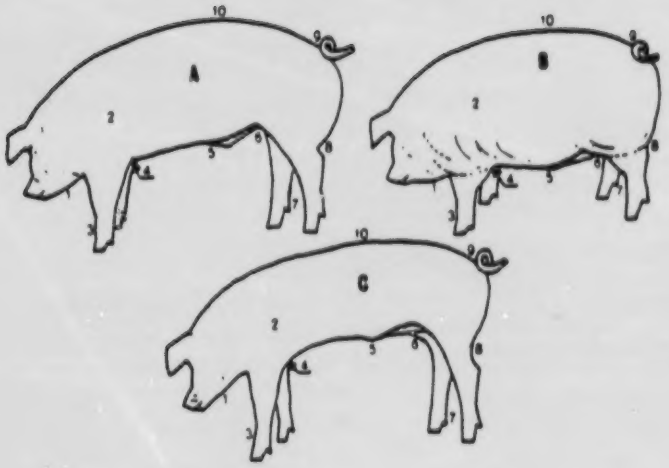
SIDE VIEW OF SWINE



A Modern meat type, B Old-fashioned

C Meatless

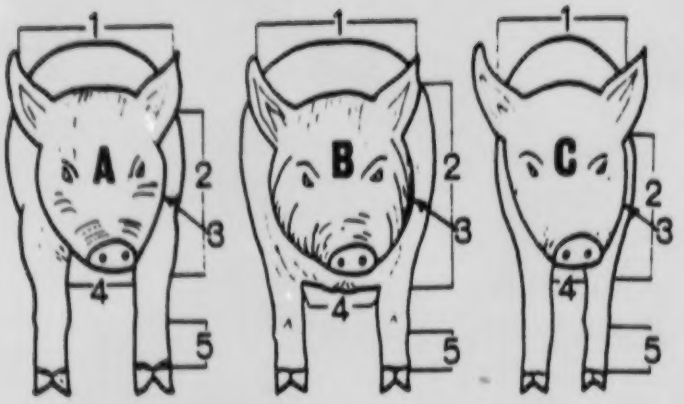
Source: Purdue University.

DESCRIPTION OF SIDE VIEW OF SWINE

No.	Part or Area	Animal A (Mod. Meat Type)	Animal B (Old-Fashioned)	Animal C (Meatless)
1	Jowl	Clean, firm, trim	Wasty, loose, flabby	Extremely neat, clean
2	Shoulders	Extreme muscle development	Thick, heavy wrinkles	Lacks muscle development
3	Front Legs	Correctly set, heavy boned, excellent substance, strong pasterns	Shorter-legged, slightly lighter-boned, weak pasterns	Lacks substance of bone
4	Fore Flank	Free of excess fat deposits	Heavy fat deposit	Clean and neat
5	Underline	Clean and neat, excellent length, adequate depth	Short, loose, flabby, deep body	Clean and neat
6	Rear Flank	Tucked up a bit	Deep, full, loose, sloppy	Clean and neat
7	Rear Legs	Length of leg straight, correctly placed, heavy rugged bone, moderately long, strong pasterns	Short, set under body	Desirable length of leg, lacks substance of bone
8	Ham	Good depth and breadth	Deep, bulging	Shallow, narrow
9	Tail Setting	High	Low	Low
10	Topline	Extremely strong uniformly arched	Short, flat unevenly arched	Long, lacks arch

TM 3.2.2b

FRONT VIEW OF SWINE

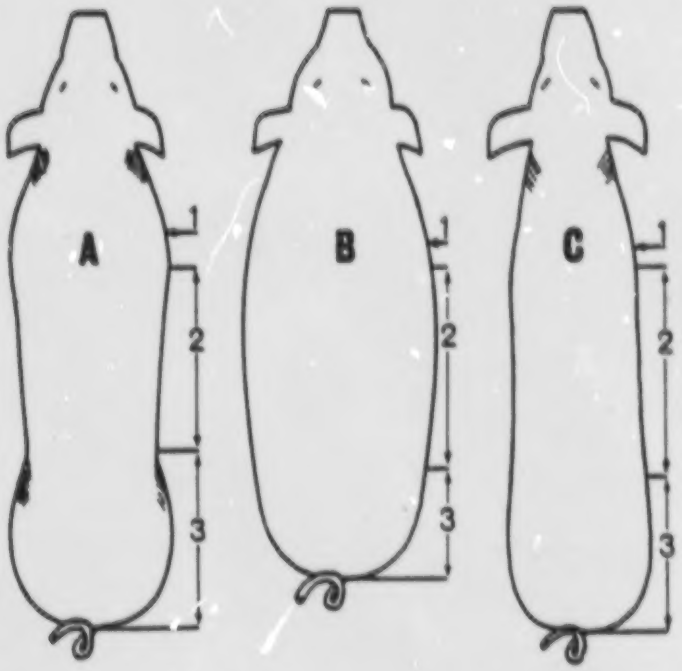


Source: Purdue University.

DESCRIPTION OF FRONT VIEW OF SWINE

No.	Part or Area	Animal A	Animal B	Animal C
1	Top	Thick, meaty	Lacks uniform symmetrical turn	Lacks thickness, width
2	Shoulder	Considerable muscle development	Lacks muscular appearance	Lacks thickness, depth
3	Jowl	Trim, clean	Heavy fat deposits	Neat, trim clean-cut
4	Chest Floor	Wide, clean	Good width but fat	Narrow and shallow
5	Cannon Bone Area	Desirable length of leg, substance	Lacks leg length, less substance	Light-boned, lacks substance

TOP VIEW OF SWINE



A Modern meat type, B Old-fashioned

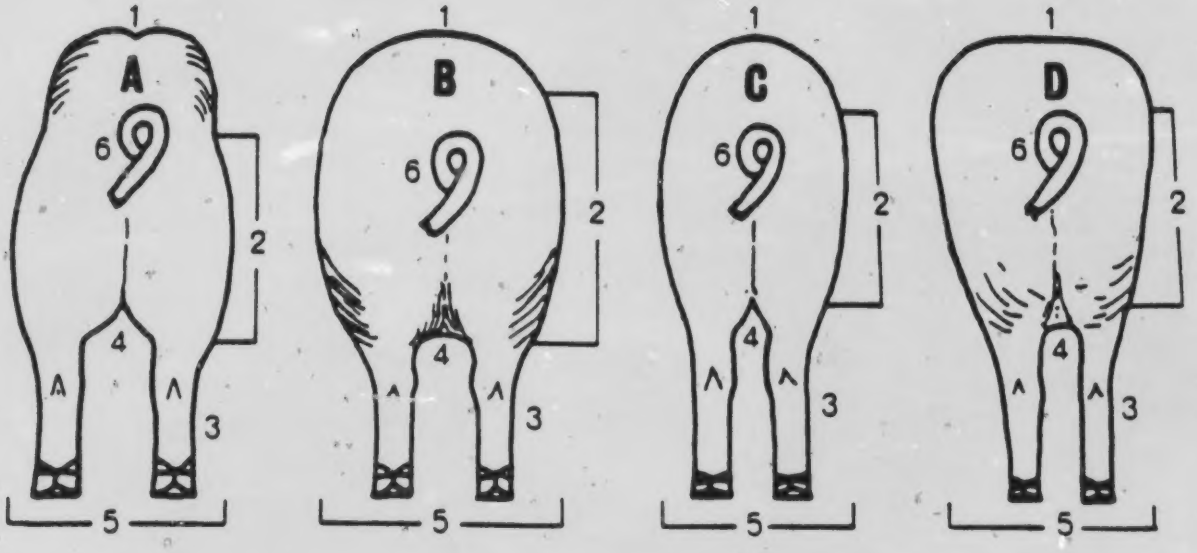
C Meatless

Source: Purdue University.

DESCRIPTION OF TOP VIEW OF SWINE

No.	Part or Area	Animal A	Animal B	Animal C
1	Shoulder area	Thickness and muscling	Lacks muscle development	Lacks muscle development
2	Fore-rib area	Not full and smooth	Smooth and full	Lacks thickness and muscling
3	Ham	Good length, flare, thickness, muscling	Short, lacks thickness, length and flare	Adequate length, lacks thickness and muscling

REAR VIEW OF SWINE



A Modern meat type, B Old-fashioned,

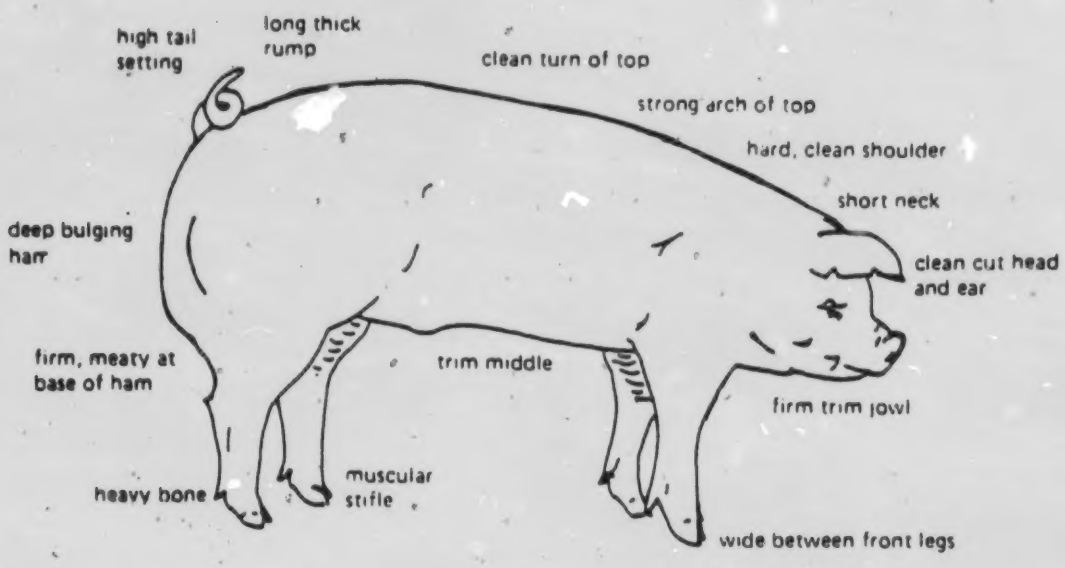
C Meatless, D Meatless - fat

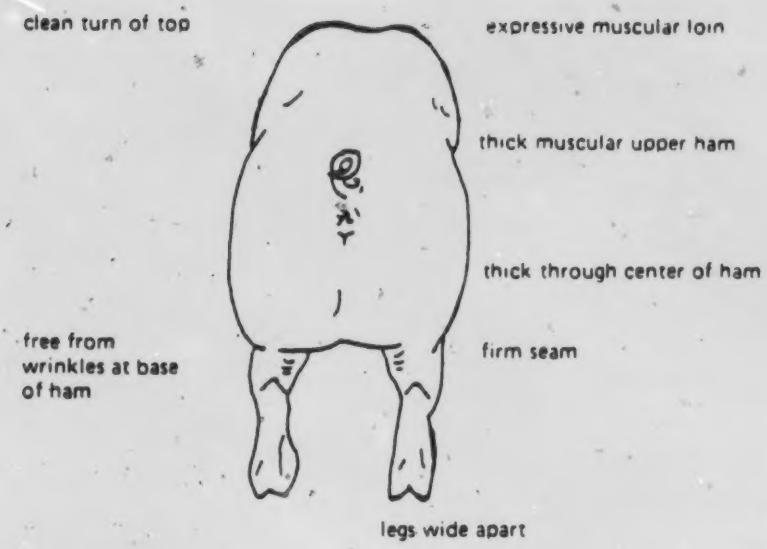
Source: Purdue University.

DESCRIPTION OF REAR VIEW OF SWINE

No.	Part or Area	Animal A	Animal B	Animal C	Animal D
1	Top	Tremendous strength, desirable shape	Lacks muscling	Lacks muscling	Square, right-angle
2	Ham	Trim, thick, muscular, expressive	Lacks muscling, tapers toward bottom	Rather flat, expressionless	Flat, expressionless
3	Legs	Heavy bone, straight	Short, average bone size	Long-legged, fine-boned	Fine bone
4	Twist or Crotch	Cut-up	Deep, full	Extremely cut-up	Deep, full
5	Feet	Set wide, out on corners	Set too close under center of body	Narrow stance	Set very close
6	Tail	High, clean meat	Rather low, countersunk	Rather low, short, steep, narrow rump	Counter-sunken

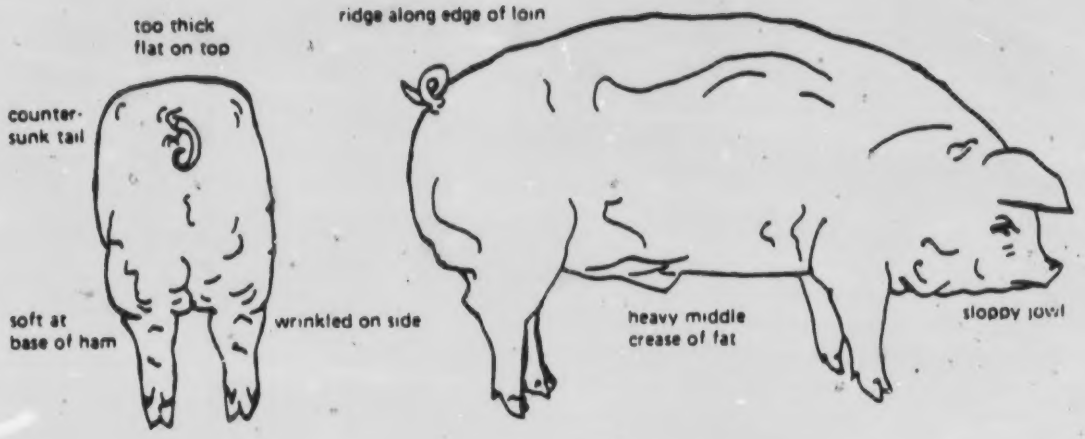
IDEAL MARKET HOG




clean turn of top
expressive muscular loin
thick muscular upper ham
thick through center of ham
free from wrinkles at base of ham
firm seam
legs wide apart

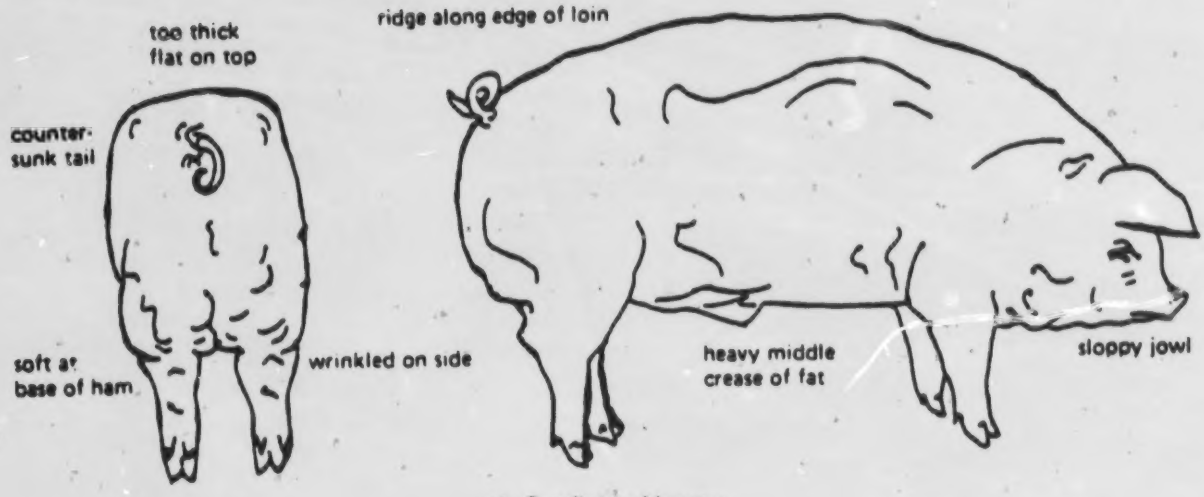
Source: Animal Science and Industry Laboratory Manual.

OVERFINISHED MARKET HOG

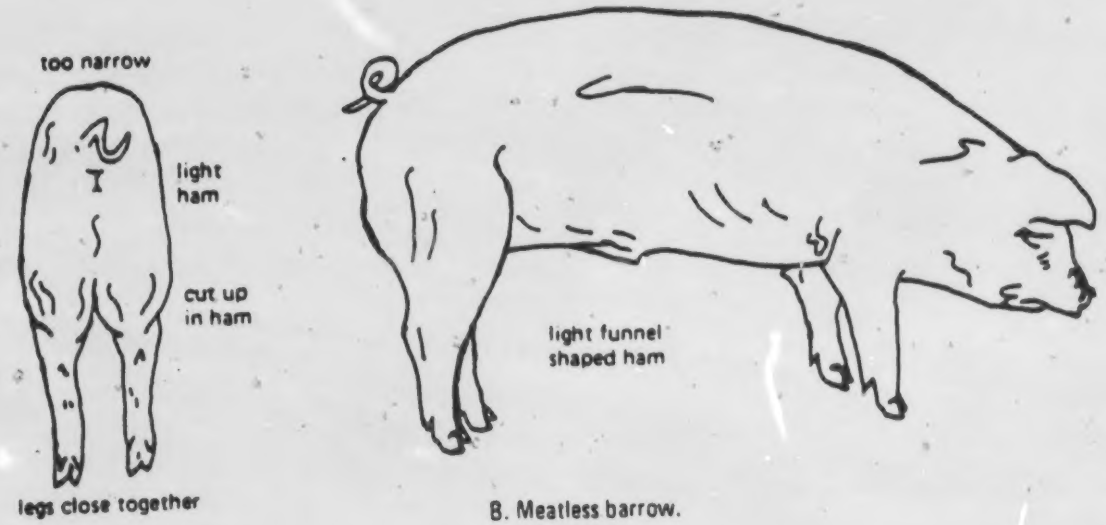


Source: Animal Science and Industry Laboratory Manual.

MEATLESS TYPE HOG



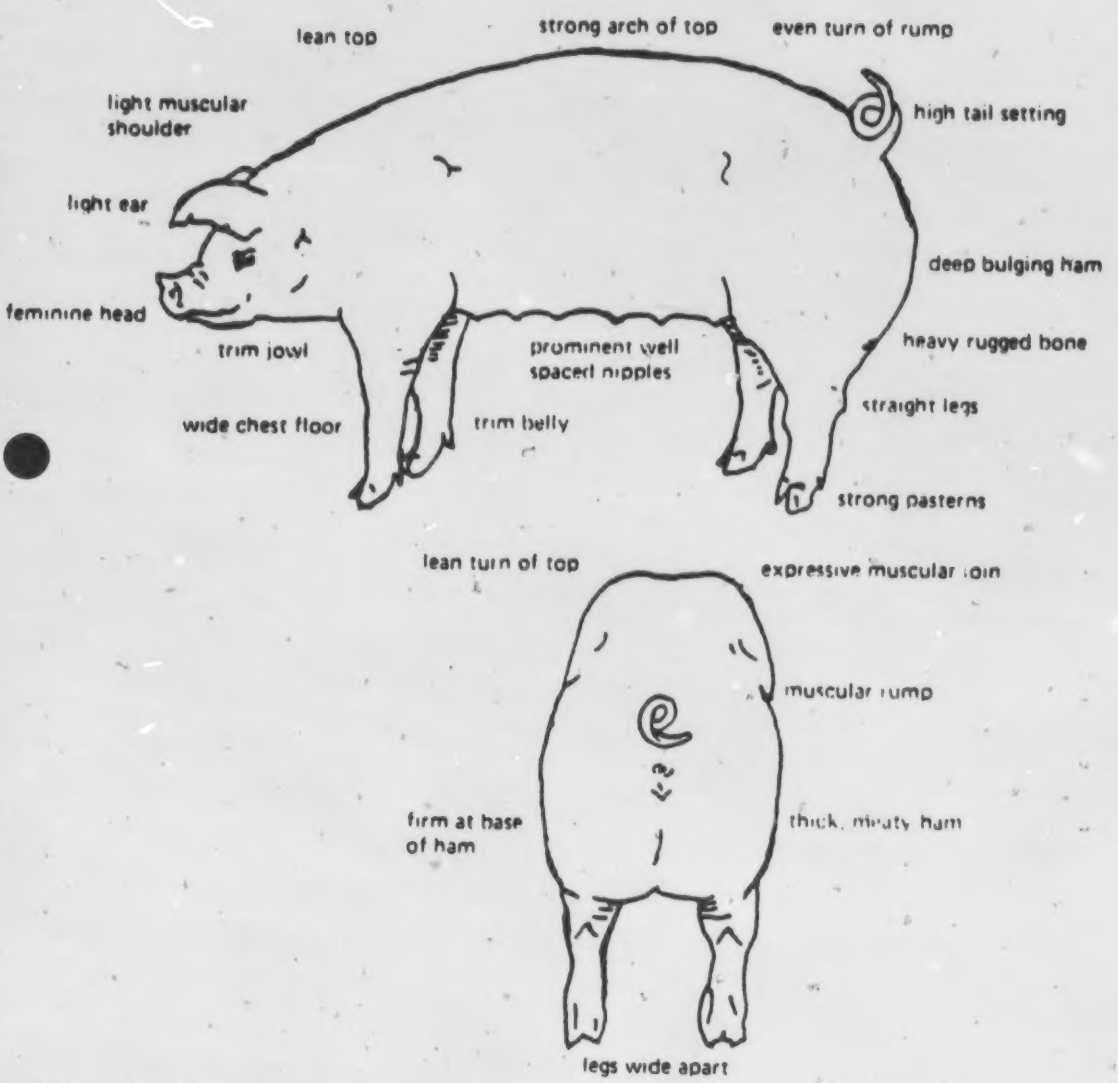
A. Overfinished barrow.



B. Meatless barrow.

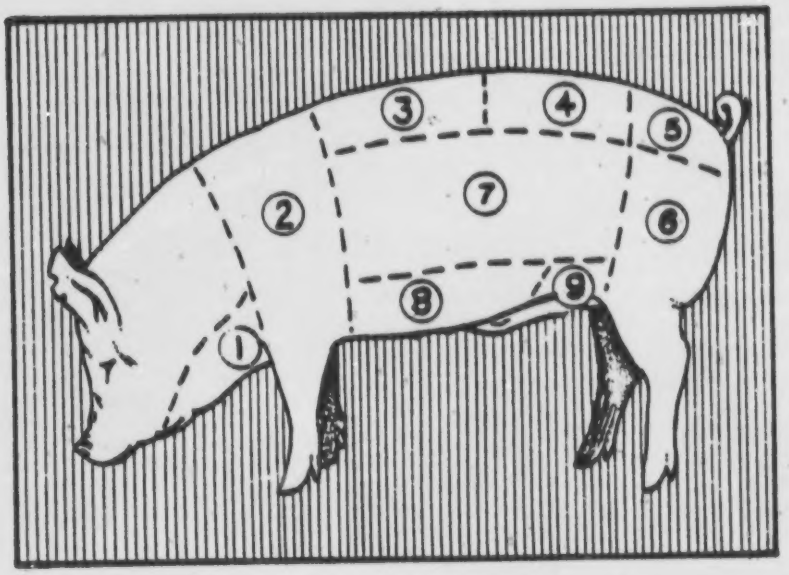
Source: Animal Science and Industry Laboratory Manual.

BREEDING GILTS



Source: Animal Science and Industry Laboratory Manual.

TEST ON MAJOR PARTS OF A HOG (SIDE VIEW)



1. _____ 2. _____

3. _____ 4. _____

5. _____ 6. _____

7. _____ 8. _____

9. _____

4. JUDGING, SELECTION, AND EVALUATION OF SHEEP

4.1 Performance Objective

a. Given a written check-out activity concerning judging, selection, and evaluation of sheep, each student must complete the activity with 80 percent accuracy.

b. Given class(es) of four market or breeding sheep (while live animals are preferred, slides or pictures may be used), have students place class(es). Each student must score at least 40 out of 50 possible points.

4.2 Teaching-Learning Activities

a. This section on judging, selection, and evaluation of sheep can best be taught using the problem-solving procedure. Prepare appropriate problems for class use.

b. Obtain pictures, slides, models, or sheep for students to observe and practice placing.

c. Take a field trip to judge sheep.

d. Use a person knowledgeable about judging sheep to help explain judging terminology and to point out strong and weak characteristics of sheep.

e. Make and use transparencies and/or handouts from transparency masters at the end of this section.

f. Order and use materials listed under List of Resources at the end of the unit.

4.2.1 Know the parts of sheep. (See transparency masters 4.2.1a and 4.2.1b.)

Students must know the parts of a sheep before they can learn what is important about different parts. A knowledge of sheep and carcass terminology is necessary in order to give reasons for placing a class.

4.2.2 Select the ideal type of sheep.

To judge (evaluate) sheep, you must first develop a "mental image" of the ideal type of sheep. (See transparency masters 4.2.2a, 4.2.2b, 4.2.2c, 4.2.2d, 4.2.2e, 4.2.2f, 4.2.2g, and 4.2.2h.) The ideal ewe or ram should possess an abundance of scale. The bigger, longer, heavy-bones sheep are in demand in all breeds. Sheep with heavy wool must be handled to determine conformation, muscling, and finish. Handle sheep gently; they bruise easily. The following should be observed:

a. Finish and strength of top - With fingers extended and close together, check the finish (amount of fat) and strength over the top. Press firmly with the balls of the fingers of one hand. It is difficult to feel the bones of the spine, ribs, and shoulders of very fat sheep. Overly fat sheep feel too soft and smooth over the rib and loin edge. Thin sheep have a very prominent bone structure.

b. Finish or fleshing over ribs, spring of ribs and breed characteristics - Determine the amount and smoothness of finish on the ribs by pressing firmly with your fingers. Feel for an even covering of firm fat. The curvature of the palm of your hand indicates the spring of ribs and muscling over the back. The head should be free from wool around the eyes. Although the head shape depends on particular breed characteristics, the head should be wide between the eyes. The face should be of medium length.

c. Width of loin - The loin is one of the more valuable cuts. Look for a meaty, deep, firm loin.

d. Thickness of shoulder - Check for the smoothness and tightness of shoulder. A thick, meaty shoulder is an indication of muscling. The neck should blend in smoothly with the shoulder.

e. Size of leg - Determine the size of the leg and the amount of bulge on both inside and outside by grasping the leg firmly as close to the body as possible. In order to determine the size of the leg correctly, use both hands and press firmly with your fingers meeting on the inside of the leg. The leg should be firm and full. Since the leg is the highest valued cut of the carcass, it should be the thickest portion of the body. The legs make up about 33 percent of the carcass weight.

f. Depth of twist and straightness of feet and legs - Determine the depth of twist and leg by placing one hand on the rump and one between the rear legs. The twist should be meaty. The legs should be straight and out on the corners of the body. Strong, straight legs with heavy bones are a must in breeding animals.

g. An ideal market lamb - An ideal market lamb should grade USDA choice and have at least 47 percent of its carcass weight in the leg, loin, rack, and shoulder.

4.2.3 Judging market lambs. (See transparency master 4.2.3a.)

a. There are many ways that sheep can be judged and numerous scorecards have been devised to help arrive at a final conclusion. The basic idea in judging market lambs, as pointed out in the previous section, is to have a meaty animal that is not wasty, one with a high percentage of high priced cuts. The two major things evaluated in market lambs are conformation and finish. Conformation makes up over half the total score and

finish about 40 percent of the total score in judging. Cutability is receiving more attention and can be estimated during judging.

b. "Finish" is a term used to express the degree of fatness of an animal. Underfinished or overfinished are less valuable than correctly finished sheep. Finish can be estimated by observation and handling if you first learn what the ideal or desirable animal is like. It is more important to handle sheep than beef or swine because they can more readily be trimmed to cover defects. Be careful not to damage the animal as they bruise quite easily.

Correctly finished sheep appear trim and not wasty. They are trim in the breast, with curvature over the top, not flat. They are firm, not soft. When handled, they feel firm to the touch. The loin should be full, well muscled. The legs should be thicker in the rear than the shoulders in the front. Sheep that are very deep in the leg and breast are probably overfat.

c. "Conformation" is the term used to describe the body form, physical characteristics, or appearance of an animal. The concept of an ideal market lamb has changed from what is now considered an overfinished animal to a very meaty type animal. The ideal lamb will likely continue to change as further study is given to correlating live animals to carcasses.

The conformation of the ideal market lamb would include good general appearance with straight top and underline, well muscled, with wide set legs. The most important parts are the hind quarters with a thick deep meaty loin, deep, thick, meaty leg, and well muscled, thick, level rump being most important. The front quarter should consist of a thick straight back, good spring of ribs with deep forerib and muscular shoulder. The middle should be trim and free of wastiness.

Good finish may make an animal appear more muscular than it really is. Try to evaluate finish first to avoid errors in evaluating conformation. If possible, you should see the carcasses of at least some of the animals you judge.

4.2.4 Judging breeding ewes and rams. (See transparency master 4.2.4a.)

a. While some of the general characteristics looked for in market animals are similar to breeding animals, conformation becomes even more important, comprising about three-fourths of the total score, while breeding qualities comprise about one-fourth of the total score. In actual selection of breeding animals as compared to judging sheep, performance is very important.

b. In looking at conformation, it may be valuable to break it into three sub-sections of general appearance, hindquarter and front quarter. General appearance would comprise about one-quarter of total score while hindquarter comprises a little

more than one-and the hind quarter of the total score and front quarter a little less than one fourth of the total score.

(1) General appearance is based on size, scale, and type. Look for a roomy, heavy-boned animal that is large for its age. Animal should be straight-lined, deep-ribbed, and long.
(2) Hindquarter is about the same as in market animals with leg and loin being very important--muscular, meaty, wide and deep with a long, level, full rump.
(3) In the forequarter, a wide, straight back, with good spring and depth of ribs, muscular shoulders and deep, wide check are important.

c. In breeding qualities, emphasis is placed on underpinnings. Sheep should be heavy-boned with correctly placed legs well out on the corners with strong pasterns. The head should show feminine or masculine characteristics, bright eyes free from wool blindness, and have correct color markings for breed. Fleece should be long staple, uniform crimp, and dense.

d. Some of the things that are desired in performance are high weight gain per day of age or more weight at a younger age, which can be called superior growth rate; efficient feed utilization or less feed per pound of gain; and yield of higher priced retail cuts.

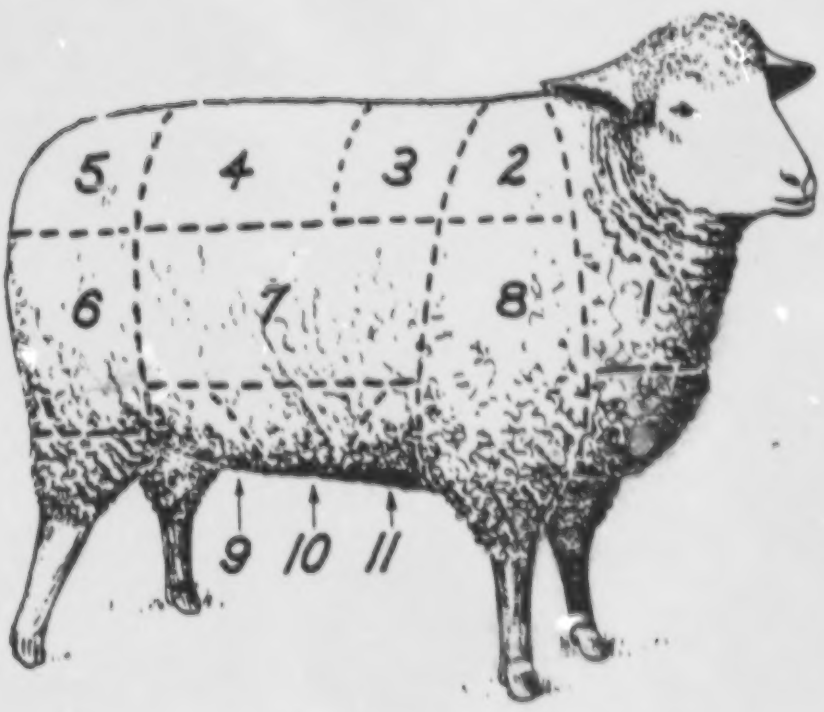
4.3 Supplementary Materials

References:
1. Animal Science and Industry Laboratory Manual.
2. Judging Market Lambs: Guide for Beginning Judges.
3. Live Animal Carcass and Selection Manual.
4. Livestock Judging, Selection and Evaluation.
5. Livestock Judging Suggestions, MP 704.

Transparency Masters:
1. 4.2.1a, "Parts of a Sheep."
2. 4.2.1b, "Major Parts of a Sheep."
3. 4.2.2a, "Side View of Sheep."
4. 4.2.2b, "Description of Side View of Sheep."
5. 4.2.2c, "Front View of Sheep."
6. 4.2.2d, "Description of Front View of Sheep."
7. 4.2.2e, "Top View of Sheep."

TM 4.3a

TEST ON MAJOR PARTS OF A SHEEP



1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____
7. _____ 8. _____
9. _____ 10. _____
11. _____

8. 4.2.2f, "Description of Top View of Sheep."

9. 4.2.2g, "Rear View of Sheep."

10. 4.2.2h, "Description of Rear View of Sheep."

11. 4.2.3a, "Judging Market Lambs."

12. 4.2.4a, "Judging Breeding Ewes and Rams."

13. 4.3a, "Test on Major Parts of a Sheep."

4.4 Check-Out Activities

a. Provide students with the following exercise:

1. Name the eleven major parts of a sheep. See Transparency Master 4.3a.

2. The most important characteristic in both breeding and market sheep is finish. T F

3. The leg makes up about 33 percent of the carcass weight. T F

4. The breast of a good market lamb should be full. T F

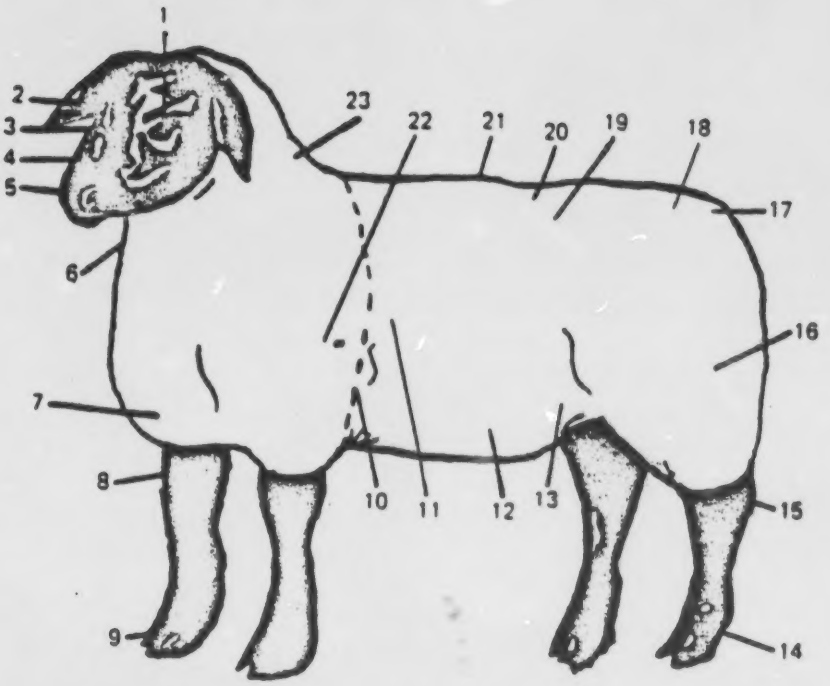
5. Last rib should show good spring. T F

ANSWERS:

1. a. Neck
   b. Top of shoulder
   c. Back
   d. Loin
   e. Rump
   f. Leg
   g. Ribs (rack)
   h. Shoulder
   i. Hind flank
   j. Belly
   k. Fore flank
2. False
3. True
4. False
5. True

b. Provide students with classes of sheep and have students place each class of sheep. Use pre-determined scoring of classes to rate students. Students who do not average 40 out of 50 points should be given further instructions and practice.

PARTS OF A SHEEP

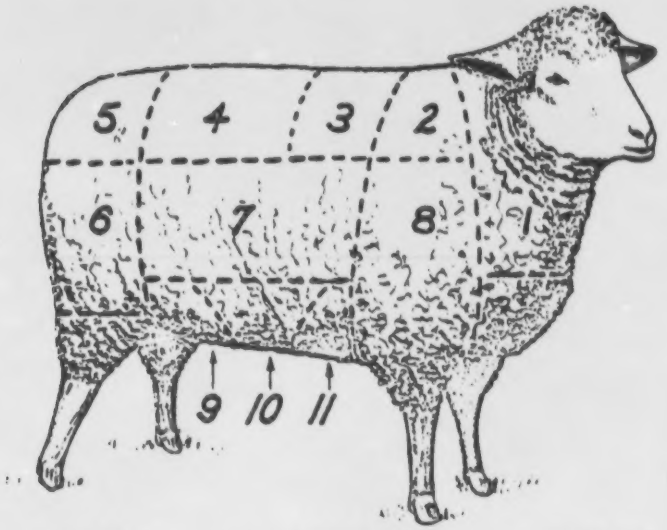


1. eye
2. ear
3. face
4. nose
5. muzzle
6. throat
7. breast
8. knee
9. toe
10. heart girth
11. ribs
12. middle
13. flank
14. pastern
15. hock
16. leg
17. dock
18. rump
19. edge of loin
20. loin
21. back
22. shoulders
23. neck

Source: Animal Science and Industry Laboratory Manual.

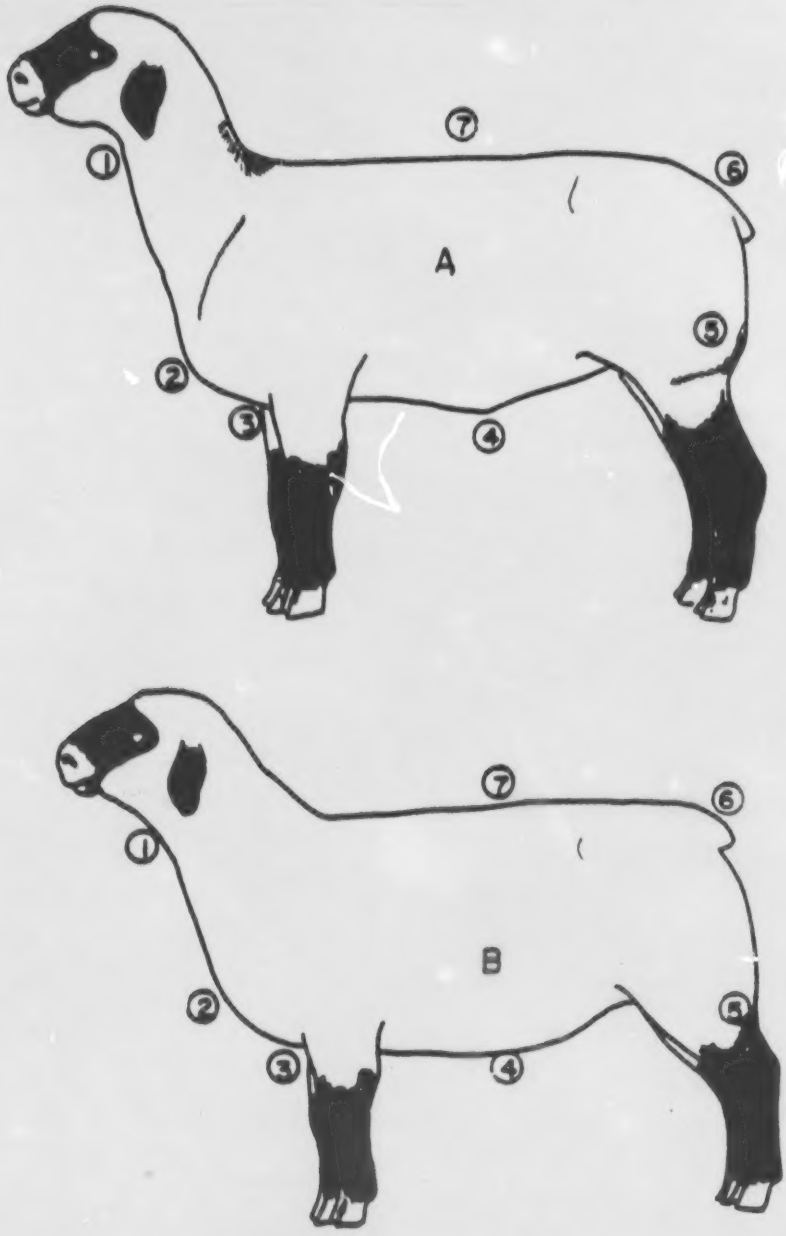
MAJOR PARTS OF A SHEEP

1. NECK
2. TOP OF SHOULDER
3. BACK



4. LOIN 5. RUMP 6. LEG
7. RIBS (Rack) 8. SHOULDER
9. HIND FLANK
10. BELLY
11. FORE FLANK

SIDE VIEW OF SHEEP

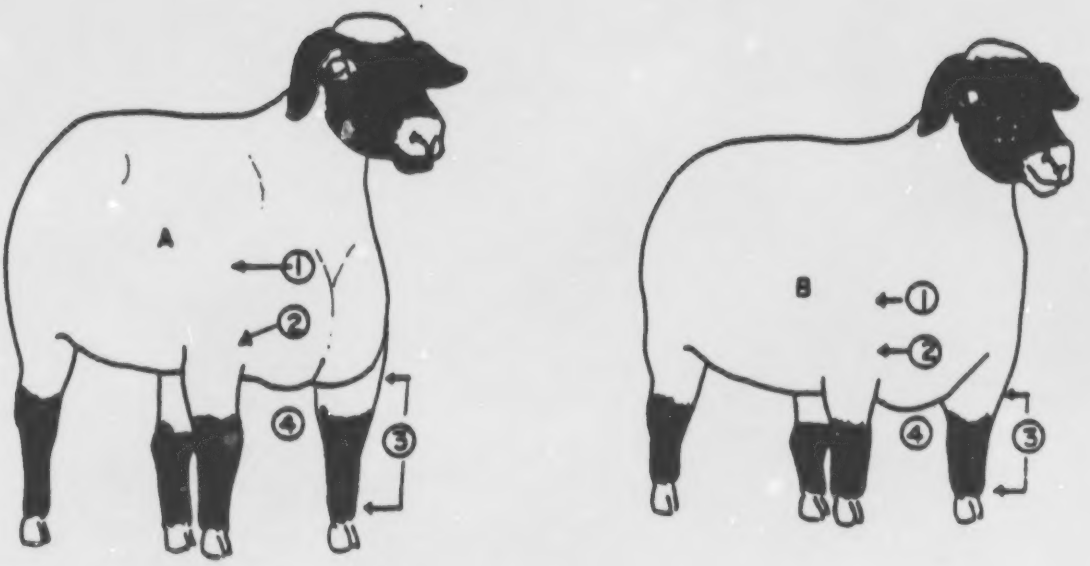


Source: Livestock Judging, Selection, and Evaluation.

DESCRIPTION OF SIDE VIEW OF SHEEP

No.	Part or Area	A (Desirable)	B (Undesirable)
1	Throat area	Clean	Excessive finish
2	Breast	Clean and neat	Full
3	Forearm	Large	Small, fat
4	Middle	Clean and Neat	Deep side, flabby
5	Leg of lamb	Plump, wide, muscular	Flat, narrow, fat
6	Dock	Not so smooth, straight, hard	Neat, smooth, soft
7	Top line	Long, straight	Weak, short

FRONT VIEW OF SHEEP

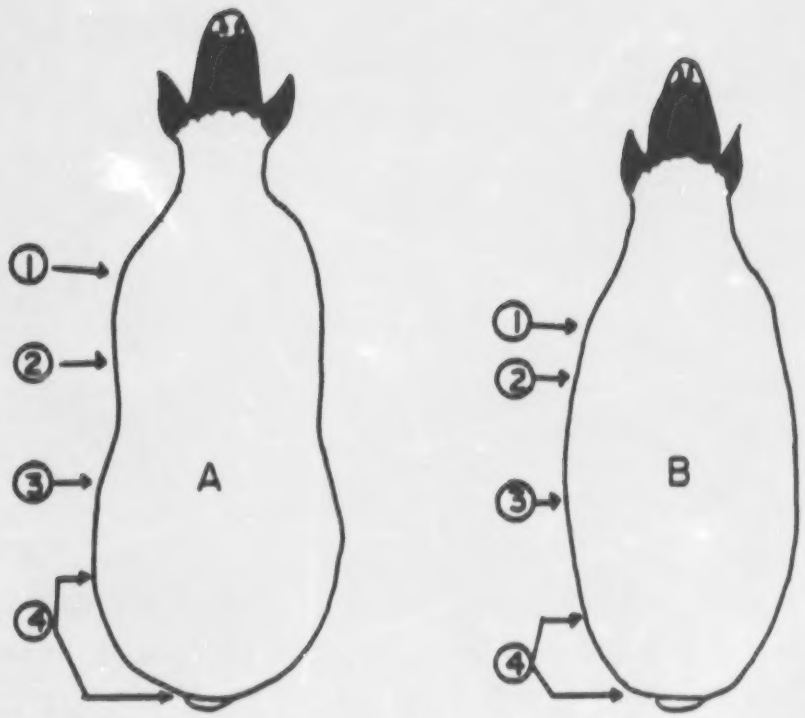


Source: Livestock Judging, Selection, and Evaluation.

DESCRIPTION OF FRONT VIEW OF SHEEP

No.	Part or Area	A (Desirable)	B (Undesirable)
1	Shoulder	Muscle development	Lacks muscle development
2	Forearm	Muscle development	Lacks muscle development
3	Leg	Heavy boned	Lacks heavy bone structure
4	Breast	Clean and trim	Full and heavy

TOP VIEW OF SHEEP

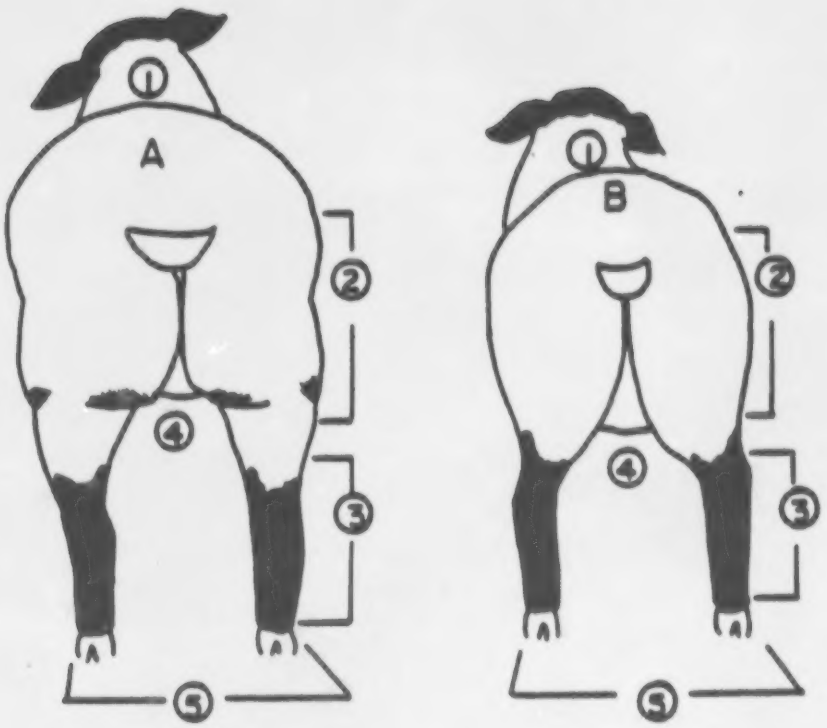


Source: Livestock Judging, Selection, and Evaluation.

DESCRIPTION OF TOP VIEW OF SHEEP

No.	Part or Area	A (Desirable)	B (Undesirable)
1	Shoulder	Not full and smooth	Lacks muscling
2	Heart girth or forearm	Not full and smooth	Smooth
3	Last rib	Good spring	Lacks expression
4	Rump	Long, straight, thick	Short, tapered

REAR VIEW OF SHEEP

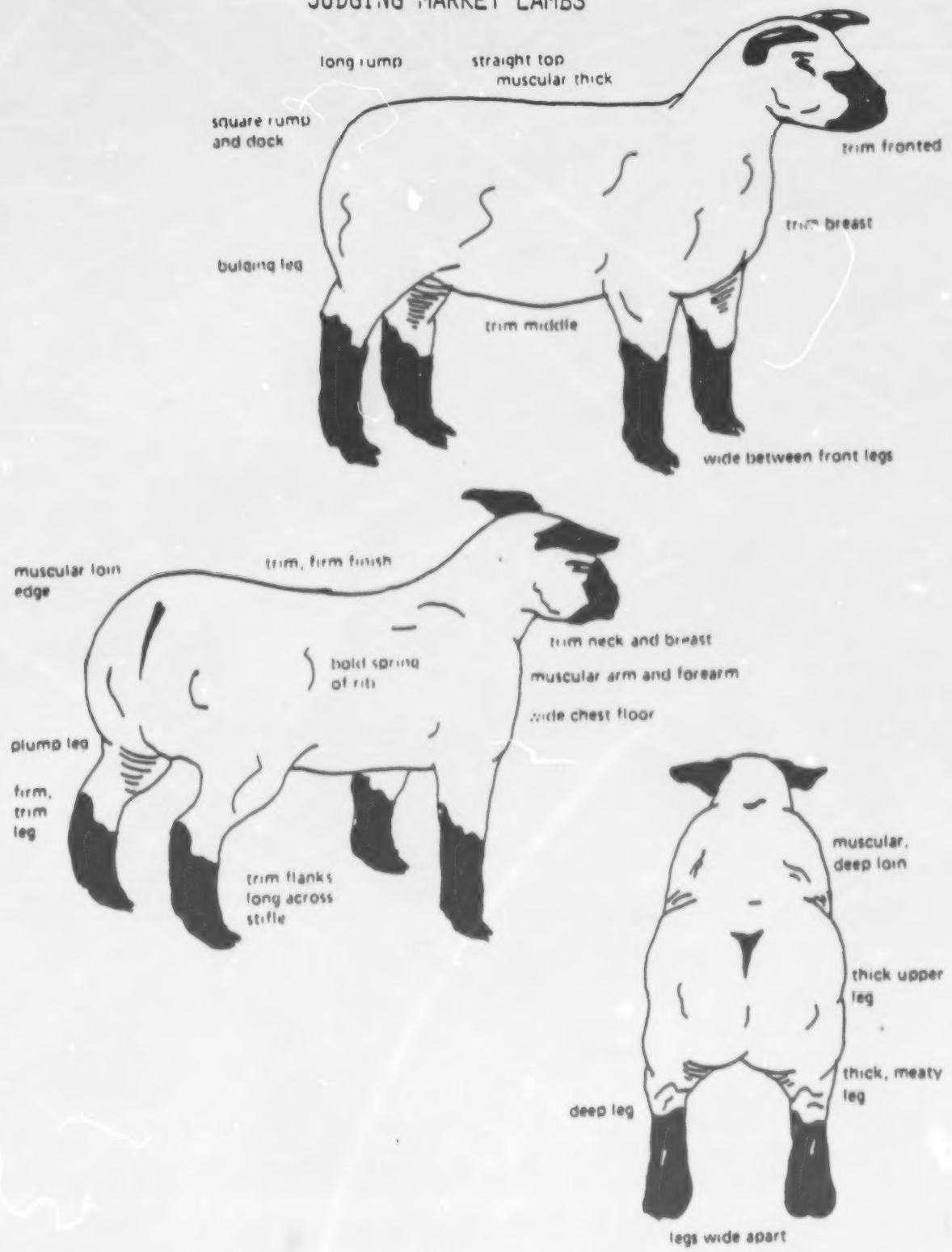


Source: Livestock Judging, Selection, and Evaluation.

DESCRIPTION OF REAR VIEW OF SHEEP

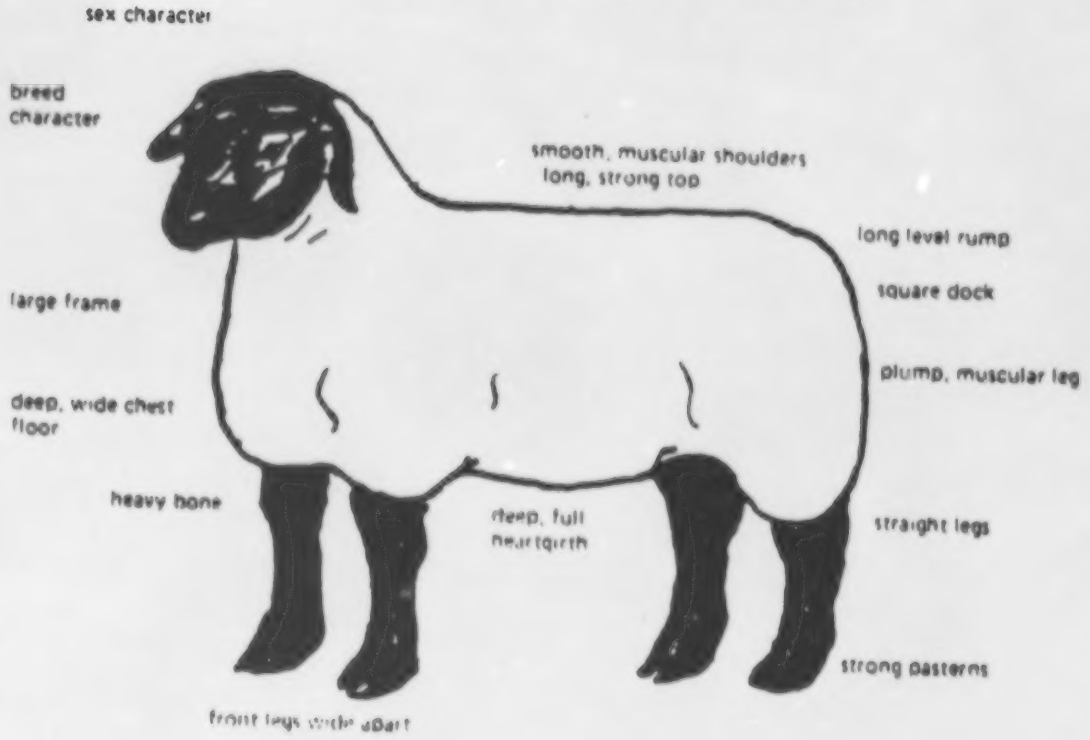
	PART OR AREA	A (DESIRABLE)	B (UNDESIRABLE)
1	DOCK	SLIGHTLY ROUGH	SMOOTH, SOFT
2	LEG OF LAMB	EXTREME MUSCLE DEVELOPMENT	LACKS MUSCLE DEVELOPMENT
3	LEGS	HEAVY BONE, STRAIGHT	AVERAGE BONE SIZE
4	TWIST	"CUT UP", LACKS DEPTH	DEEP, FULL
5	FEET	SET WIDE	SET CLOSE TOGETHER

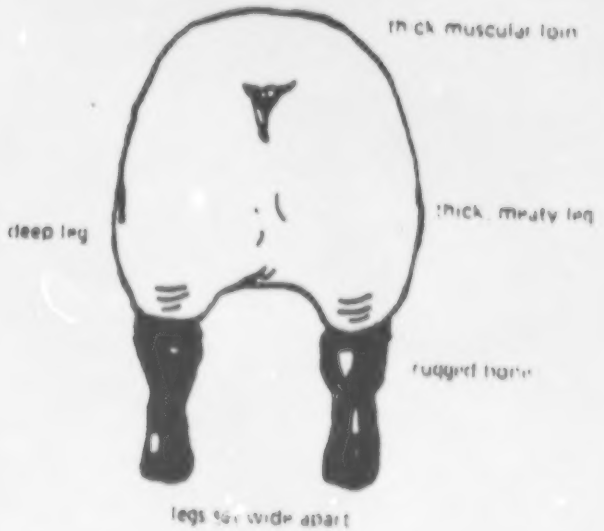
JUDGING MARKET LAMBS



Source: Animal Science and Industry Laboratory Manual.

JUDGING BREEDING EWES AND RAMS





EECE dense, long staple, uniform in grade, distinct crimp, free from black fibers or kemp.

Source: Animal Science and Industry Laboratory Manual.

5. GIVING ORAL REASONS

5.1 Performance Objective

a. Given a written check-out activity concerning giving oral reasons for placing classes, students will complete the activity with 80 percent accuracy.

b. Given class(es) of four beef, hogs, and/or sheep (while live animals are preferred, slides or pictures may be used), students will give oral reasons on how they placed class(es). Each student must score at least 40 out of 50 possible points.

5.2 Teaching-Learning Activities

a. This section on giving oral reasons can best be taught using modified problem-solving procedure or through a series of demonstrations followed by practice. If modified problem-solving is to be used, prepare appropriate problems for class use.

b. Use pictures, slides, models, or real animals to practice giving reasons.

c. Take a field trip to see livestock and practice giving reasons.

d. Use person(s) knowledgeable about giving oral reasons and have them give a demonstration on giving reasons on different classes of livestock.

e. Make and use transparencies and/or handouts from transparency masters at the end of this section.

f. Order some of the materials listed under List of Resources if they are not already available.

g. Listen to tapes of sample reasons.

5.2.1 Advantages of giving oral reasons.

a. Helps students increase knowledge about livestock and to compare and contrast animals with each other.

b. Helps students learn to organize better, think on their feet, and to keep notes on what they saw.

c. Requires students to express orally to someone else what they have observed. Improves speaking ability and confidence.

d. Requires observation with more critical awareness.

5.2.2 Notes for oral reasons.

Good notes are a tremendous asset in giving effective reasons. Contestants usually are given 15 minutes on reason classes. This is ample time to prepare effective notes if you budget your time. After outlining your notes, recheck your placing with what you have written down. Do this by backing away from the class so that you can see all the animals, and hurriedly organize a set of reasons while looking at the class.

Taken from Livestock Judging Suggestions.

5.2.3 Giving reasons. (See transparency master 5.2.3a.)

Reasons are an explanation of the major differences between animals which influenced your placing. The value of your reasons and the grade you receive depend principally on the following:

Accuracy - This is the most important phase of oral reasons. You must evaluate the major points in the class correctly. Failure to do so will result in a lower reason grade.

Organization and delivery - Organize your reasons and present them in a logical manner. Poorly presented reasons lose their effectiveness if the listener can't follow you. Speak clearly and slowly. Although emphasizing certain points is important, avoid talking too loudly or rapidly. A well-organized set of reasons should never require more than two minutes. Keep your numbers straight.

Completeness - Always talk about the major points or differences of each animal, omitting small, unimportant differences that you are not certain about.

Terminology - Always use the correct terms for the livestock class on which you are given reasons. Use past tense rather than present.

There is no best form to use in giving reasons. Develop a flexible system, adaptable to different classes, and yet including the four essentials listed previously. Oral reasons are primarily for comparison; however, a limited amount of description makes your reasons more effective.

Taken from Livestock Judging Suggestions.

5.2.4 A suggested form for giving reasons.

The organization of a set of reasons largely determines how easy the reasons are "to comprehend." As already stated, there are many different systems of organizing reasons and no one is best for all situations.

The system presented here is logical and clear, and will enable each student to use the same procedure. Below is listed the basic

organization outline for an entire set of reasons, followed by examples and comments on specific steps. (See transparency master 5.2.4a.)

(Placing 1 - 2 - 3 - 4)

Step 1. Give name of class and how you placed it.

2. Opening statement and criticism of your top animal.

3. Reasons for placing 1 over 2, using comparative terms.

4. Grants for 2 over 1, pointing out advantages of 2 over 1. Comparative terms.

5. Criticisms of 2. Critical terms.

6. Reasons for placing 2 over 3.

7. Grants for 3 over 2.

8. Criticisms of 3.

9. Reasons for placing 3 over 4.

10. Grants for 4 over 3.

11. Criticisms of 4.

In giving reasons, a class of four animals (1-2-3-4) divides itself into three pairs: a top pair (1-2), middle pair (2-3), and bottom pair (3-4). The same procedure is used in each pair. For purposes of presenting the following examples, let us assume that we have a class of fat steers placed 1-2-3-4.

Step 2: Reasons for placing 1 over 2. Give the important general points first; then give details to complete the story. In judging fat steers, examples of "general" terms are larger framed, more nicely balanced, and heavier muscled. Differences in regard to these general factors should be mentioned in the lead statement, then detailed in the succeeding sentences. Example: I placed 1 over 2 since 1 was a larger framed steer that was heavier muscled and more nicely balanced. 1 had more width over his top, more thickness through his rump, and more plumpness to his lower quarter. Due to 1's advantages in muscling, it would result in a heavier muscled carcass.

It is important not to use a great many terms in close succession (Example: no. 1 was a fatter, typier, thicker, more nicely balanced, shorter legged, deeper wider topped, deeper flanked, thicker quartered steer than no. 2), becuase the terms come so fast that the listener cannot possibly hear and evaluate all of them. Note, in the second sentence, which is rather long, that the terms used as adjectives, no more than two or three should be used in succession.

More terms of the kind "wider over the top" and "deeper in the quarter" can be used in succession because more words are required to mention each point and it is easier for the listener to follow.

Step 3: Grants for 2 over 1. "I grant (or realize, or concede) that 2 was a smoother, more stylish steer that was trimmer middled and stronger over the top than 1. (Always end a grant statement with "than" plus a number.)

Step 4: Criticisms of 2. "But I placed (or criticize, or fault) 2 second because he was a narrow topped, poorly balanced steer that was shallow and narrow through the quarter.

The same procedure is used on the middle and bottom pairs as on the top pair. These 2 pairs may be introduced by "In the middle pair, I placed 2 over 3 . . ." and "In the bottom pair, I placed 3 over 4 because . . ."

Notice in the examples above that complete sentences are used. If it isn't grammatically correct, it isn't correct in a set of reasons. Words and phrases alone should not be used in oral reasons.

There are, of course, differences of opinion regarding the use of some of these words and phrases in reasons. Several of those listed below are not considered objectionable by all people. However, each of them is considered undesirable by some people, and all of them can admittedly be replaced with better words and phrases. Eliminating this kind of terminology will result in an improved set of reasons. (See transparency master S.2 4b.)

1. Animal or individual. Instead, say barrow, gilt, wether, ewe, steer, or heifer, etc.

2. It. Instead use either he or she.

3. Lacks. This term should be used sparingly. Ordinarily, instead of saying an individual lacks something, it is more effective to directly point out the fault. For example, instead of saying, "I criticize 4 because she lacks depth," say, "I criticize 4 because she is shallow."

4. Kind of (steer, barrow, etc.). Instead of, for example: "A smoother kind of steer," it is simply, "A smoother steer."

5. "I placed no. 1 steer over no. 2 steer." Certainly the word steer can be left out and even no. It is sufficient to just say, "1 over 2."

6. "I placed this class of Angus steers in the order of 1, 2, 3, 4. Leave out "in the order of" because the phrase adds nothing to the meaning.

7. "For these reasons I placed this class . . .," is unnecessary. Conclude the reason with criticism of the bottom individual. There are some who prefer such a closing statement and the final decision is up to the teacher and/or student.

This section adapted from Livestock Judging Manual.

5.2.5 A second form for giving reasons.

1. Opening statement - Always begin a set of reasons with an opening statement such as: "I placed this class of Herefore heifers 1-2-3-4."

2. Comparison, criticisms, grants in each pair (top pair, middle pair, bottom pair) - In each pair, comparison is of primary importance. This explains the reason or reasons why one animal placed over another. Grant to the lower placed animal in each pair those points in which it excels. Criticism is of secondary importance, but can be valuable in convincing the judge that both desirable and undesirable points of an animal were recognized. The order in which these three essentials (comparisons, criticisms, grants) are presented depends on the class being considered.

3. Tell why the last place animal placed at the bottom - Remember, not every animal placing last in a class is undesirable; some classes may have four outstanding animals. Mention the desirable points as well as the undesirable of the last place animal.

4. Closing statement - Always conclude a set of reasons with a closing statement such as: "For these reasons, I placed this class of Hereford heifers 1-2-3-4."

This section taken from Livestock Judging Suggestions.

5.2.6 Terms which will assist in giving reasons.

There are many terms which can be used to describe desirable traits, undesirable traits, and also that can be used to compare two animals. Many useful terms have been presented under sections 2, 3. and 4 of this unit. A list of terms is also included in transparency masters 5.2.6a, 5.2.6b, 5.2.6c, 5.2.6d, 5.2.6e, 5.2.6f, 5.2.6g, 5.2.6h, 5.2.6i, 5.2.6j, 5.2.6k, 5.2.6l, and 5.2.6m.

5.2.7 Examples of oral reasons.

A good way to learn about giving reasons orally is to go over examples of reasons. Several examples are given as transparency masters. You may wish to reproduce these handouts for your students. The following transparency masters are included: 5.2.7a, 5.2.7b, 5.2.7c, 5.2.7d, 5.2.8e, 5.2.7f, 5.2.7g, and 5.2.7h.

5.3 Supplementary Materials

References:

1. Animal Science and Industry Laboratory Manual.
2. Livestock Judging, Selection, and Evaluation.
3. Livestock Judging Manual.
4. Livestock Judging Suggestions, MP 704.

Transparency Masters:

1. 5.2.3a, "Points to Remember in Giving Oral Reasons."
2. 5.2.4a, "Steps in Giving Oral Reasons."
3. 5.2.4b, "Terms to Eliminate in Giving Oral Reasons."
4. 5.2.5a, "Form Used for Giving Oral Reasons."
5. 5.2.6a, "Terms for Both Slaughter and Breeding Cattle."
6. 5.2.6b, "Terms for Slaughter Cattle."
7. 5.2.6c, "Carcass Terms for Slaughter Cattle."
8. 5.2.6d, "Breeding Cattle Terms."
9. 5.2.6e, "Performance Terms for Beef Cattle."
10. 5.2.6f, "Sex Characteristics of Beef Cattle."
11. 5.2.6g, "Terms for Both Market and Breeding Hogs."
12. 5.2.6h, "Terms for Both Market and Breeding Hogs." (Continued)
13. 5.2.6i, "Carcass Terms for Market Hogs."
14. 5.2.6j, "Breeding Hog Terms."
15. 5.2.6k, "Terms for Both Breeding and Market Sheep."
16. 5.2.6l, "Breeding Sheep Terms."
17. 5.2.6m, "Fleece Terms."

18. 5.2.7a, "Angus Heifers - Example of Reasons."

19. 5.2.7b, "Charolais Bulls - Example of Reasons."

20. 5.2.7c, "Crossbred Slaughter Steers - Example of Reasons."

21. 5.2.7d, "Duroc Gilts - Example of Reasons."

22. 5.2.7e, "Crossbred Slaughter Barrows - Example of Reasons."

23. 5.2.7f, "Rambouillet Ewes - Example of Reasons."

24. 5.2.7g, "Hampshire Ewes - Example of Reasons."

25. 5.2.7h, "Crossbred Slaughter Lambs - Example of Reasons."

5.4 Check-Out Activities

a. Provide students with the following exercise:

1. What are the four principle things upon which your reason scores are based?

2. Normally, the first thing you do in giving reasons is to compare the middle pair. T F

3. It is better to be specific when referring to an animal, calling it a barrow or gilt, etc., instead of referring to it as animal 1. T F

4. Lack is a good term to use in faulting or criticising an animal. T F

5. The term "it" should be avoided and the term "he or she" used. T F

ANSWERS:

1. a. Accuracy
   b. Organization and delivery
   c. Completeness
   d. Terminology
2. False
3. True
4. False
5. True

b. Provide students with one or more classes of animals and have each student judge the animal and give oral reasons. Score the reasons and have each student that does not score 40 out of 50 points correct mistakes, practice, and give another set of reasons.

POINTS TO REMEMBER IN GIVING ORAL REASONS

1. ACCURACY

2. ORGANIZATION AND DELIVERY

3. COMPLETENESS

4. TERMINOLOGY

STEPS IN GIVING ORAL REASONS

1. GIVE NAME OF CLASS AND HOW YOU PLACED IT.
2. OPENING STATEMENT.
3. REASONS FOR PLACING 1 OVER 2, USING COMPARATIVE TERMS.
4. GRANTS FOR 2 OVER 1, POINTING OUT ADVANTAGES OF 2 OVER 1. COMPARATIVE TERMS.
5. CRITICISMS OF 2. CRITICAL TERMS.
6. REASONS FOR PLACING 2 OVER 3.
7. GRANTS FOR 3 OVER 2.
8. CRITICISMS OF 3.
9. REASONS FOR PLACING 3 OVER 4.
10. GRANTS FOR 4 OVER 3.
11. CRITICISM OF 4.

Source: Livestock Judging Manual.

TERMS TO ELIMINATE IN GIVING ORAL REASONS

1. ANIMAL OR INDIVIDUAL
2. IT
3. LACKS
4. KIND OF
5. "I PLACED NO. 1 STEER OVER NO. 2 STEER."
6. "I PLACED THIS CLASS OF ANGUS STEERS IN THE ORDER OF 1 - 2 - 3 - 4."

Source: Livestock Judging Manual.

FORM USED FOR GIVING ORAL REASONS

1. OPENING STATEMENT

2. COMPARISON, CRITICISMS, GRANTS IN EACH PAIR

3. TELL WHY THE LAST PLACE ANIMAL PLACED AT THE BOTTOM

4. CLOSING STATEMENT

Source: Livestock Judging Suggestions.

TERMS FOR BOTH SLAUGHTER AND BREEDING CATTLE

SKELETAL SIZE, STRUCTURE AND SOUNDNESS

DESIRABLE (ADVANTAGES)

1. MORE CORRECTLY SET IN FEET AND LEGS
2. MORE DESIRABLE IN LENGTH AND SLOPE OF SHOULDER AND PASTERN
3. SOUNDER, FREER, EASIER IN MOVEMENT
4. STRONGER-TOPPED
5. LONGER, LEVELER RUMP
6. MORE CIRCUMFERENCE OF HEART GIRTH, DEEPER AND WIDER OF CHEST, MORE BODY CAPACITY
7. MORE SIZE, LARGER FRAME, MORE BODY MASS, MORE CORRECT IN LENGTH AND HEIGHT OF BODY, MORE CORRECT LENGTH OF LEG, MORE MASSIVE

UNDESIRABLE (CRITICISMS)

1. TOO STRAIGHT IN HOCKS (POST LEGGED)
   KNOCK KNEED
   COW-HOCKED
   SICKLE-HOCKED
2. TOO SHORT AND STRAIGHT IN SHOULDER AND PASTERN
3. STIFF, CONSTRICTED, UNSOUND IN MOVEMENT
4. WEAK TOPPED, SWAY BACKED
5. SHORT, STEEP RUMP
6. SHALLOW BODIED, NARROW BODIED, NARROW AND SHALLOW CHEST, SMALL HEART GIRTH, LACKS BODY CAPACITY
7. SMALLER, SMALL FRAME, SHORT BODIED, TOO SHORT LEGGED, TOO LONG LEGGED, LACKS BODY MASS

Source: Livestock Judging Suggestions.

TERMS FOR SLAUGHTER CATTLE

FINISH (FATNESS)

DESIRABLE	UNDESIRABLE
1. MORE CORRECTLY FINISHED (.2 INCH TO .6 INCH FAT AT 12TH RIB)	1. OVERFINISHED (MORE THAN .6 INCH FAT AT 12TH RIB) UNDERFINISHED (LESS THAN .2 INCH FAT AT 12TH RIB)
2. MORE UNIFORM IN FINISH	2. LACKS UNIFORMITY OF FINISH (PATCHY)
3. TRIMMER (LESS EXCESS FAT) IN BRISKET, REAR FLANK AND TWIST	3. WASTY IN BRISKET, REAR FLANK AND TWIST

MUSCLING

DESIRABLE	UNDESIRABLE
1. WIDER AND FULLER IN STIFLE	1. FLAT, NARROW STIFLE
2. MORE CIRCUMFERENCE AND LENGTH OF FOREARM AND GASKIN	2. LACKS PROMINENCE OF FOREARM AND GASKIN
3. LONGER-MUSCLED	3. SHORT-MUSCLED
4. STANDS AND WALKS WIDER	4. STANDS AND WALKS NARROW
5. THICKER, MORE MUSCULAR ROUND	5. THIN, LIGHT-MUSCLED ROUND
6. HEAVIER MUSCLED LOIN OR MORE EVIDENCE OF MUSCLE IN LOIN	6. LIGHT MUSCLED LOIN OR NARROW, FLAT MUSCLED LOIN

Source: Livestock Judging Suggestions.

CARCASS TERMS FOR SLAUGHTER CATTLE

1. BECAUSE OF LESS FINISH AND/OR SUPERIOR MUSCLING WILL YIELD A CARCASS WITH:

   - A HIGHER PERCENTAGE OF MUSCLE
   - A HIGHER LEAN TO FAT RATIO
   - A HIGHER PERCENTAGE OF BONELESS CLOSELY TRIMMED ROAST AND STEAK CUTS
   - LESS EXCESSIVE FAT TRIM
   - A MORE DESIRABLE USDA YIELD GRADE

2. BECAUSE OF MORE FINISH:

   - WILL YIELD A HIGHER USDA QUALITY GRADE
   - WILL RESULT IN A HIGHER DRESSING PERCENTAGE

3. SHOULD HAVE A HIGHER DRESSING PERCENTAGE BECAUSE:

   - FATTER
   - LESS FILL
   - TRIMMER MIDDLE
   - LIGHTER HIDE
   - SMALLER PERCENTAGE DRESS-OFF ITEMS
   - MORE MUSCULAR

4. WILL DRESS LOWER BECAUSE:

   - LACKS FINISH
   - EXCESSIVE FILL
   - WASTY MIDDLE
   - HEAVY HIDE
   - HIGH PERCENT DRESS-OFF ITEMS
   - LIGHTER MUSCLED

Source: Livestock Judging Suggestions.

BREEDING CATTLE TERMS

MUSCLING

BULLS

1. MORE BULGE AND FULLNESS OF MUSCLE IN STIFLE AREA
2. MORE MUSCULAR FOREARM AND GASKIN
3. LONGER MUSCLED ROUND
4. SMOOTHER-MUSCLED SHOULDER
5. MORE STRENGTH AND THICKNESS OF MUSCLE DOWN THE TOP
6. MORE VOLUME OF MUSCLE IN ROUND

HEIFERS AND COWS

1. LONGER MUSCLING IN ROUND
2. SMOOTHER MORE FUNCTIONAL MUSCLES
3. NOT AS THICK- AND BUNCHY-MUSCLED
4. MORE REFINED IN HER MUSCLING
5. MODERATE THICKNESS OF MUSCLING

FINISH OR CONDITION

BULLS AND HEIFERS

1. LESS PREDISPOSITION TO WASTE
2. NO EXCESS FAT ALONG UNDERLINE
3. TRIMMER, LESS WASTY BRISKET, REAR FLANKS
4. MORE EVENLY DISTRIBUTED FINISH OR MORE UNIFORMLY FINISHED
5. MORE DESIRABLE FINISH
6. LESS FAT IN UDDER OR SCROTUM
7. NO EXCESSIVE FAT DEPOSITS
8. EXHIBITS MORE DESIRABLE FLESHING QUALITIES

Source: Livestock Judging Suggestions.

PERFORMANCE TERMS FOR BEEF CATTLE

1. MORE WEIGHT PER DAY OF AGE
2. SUPERIOR GROWTH RATE
3. MORE EFFICIENT FEED UTILIZATION
4. GAINED FASTER
5. MORE WEIGHT AT YOUNGER AGE
6. LESS FEED PER POUND OF GAIN
7. YIELD MORE POUNDS OF RETAIL CUTS PER DAY OF AGE

Source: Livestock Judging Suggestions.

SEX CHARACTERISTICS OF BEEF CATTLE

Bulls

1. More masculinity about head and neck
2. Heavier jaw and crest
3. Better developed testes
4. Tighter sheath
5. More correct length of leg
6. More functional reproductive system

Heifers and Cows

1. More refined
2. More feminine about head and neck
3. Longer, leaner neck
4. Smaller jaw
5. Smoother shoulder
6. Stronger udder attachment
7. Better balanced udder
8. More productive udder
9. Smaller teats, more correct size teats
10. More correct udder development
11. More well developed vulva

Source: Livestock Judging Suggestions.

TERMS FOR BOTH MARKET AND BREEDING HOGS

SKELETAL SIZE, STRUCTURE AND SOUNDNESS

Source: Livestock Judging Suggestions.

DESIRABLE (ADVANTAGES)	UNDESIRABLE (CRITICISMS)
- LARGER SKELETAL STRUCTURE	- SMALL-FRAMED
- BIGGER IN HIS FRAMEWORK	- ROUND-BODIED, ROUND CHEST
- MORE BODY CAPACITY (MASS)	- SHORT-BODIED
- DEEPER RIBBED, DEEPER FORERIB	- SHALLOW CHEST, NARROW CHEST
- MORE DEPTH OF CHEST	- LACKS CAPACITY, CONSTITUTION
- MORE RECTANGULAR RIB CAGE	- NARROW-BASED
- LOOSER SKELETAL STRUCTURE	- TOO SHORT-LEGGED
- LOOSER FRAMED	- RUNS DOWNHILL
- SOUNDER AND FREER IN MOVEMENT	- UNSOUND ON THE FRONT LEGS
- MORE CORRECT LENGTH OF LEG	- BUCK-KNEED
- SOUNDER ON FRONT LEGS	- TOO STRAIGHT IN THE SHOULDER
- MORE SLOPE TO THE SHOULDER	- TOO SHORT AND STRAIGHT IN PASTERNS
- MORE CUSHION TO THE PASTERN	- STIFF, CONSTRICTED IN MOVEMENT
- LONGER, MORE LEVEL RUMP	- SHORT, STEEP RUMP
- SQUARER RUMP	- WEAK BEHIND THE SHOULDER
- WIDER BASED	- COW-HOCKED
- HEAVIER BONE	- SICKLE-HOCKED
- STOUT-HEADED	- POST LEGGED

TM 5.2.68

TERMS FOR BOTH MARKET AND BREEDING HOGS (CONTINUED)

MUSCLING

DESIRABLE	UNDESIRABLE
- LONGER, LOOSER MUSCLE STRUCTURE	- TOO TIGHT IN MUSCLE STRUCTURE
- LONGER, LESS EXPRESSIVE AND MORE CORRECT MUSCLE STRUCTURE	- TOO SHORT AND THICK IN MUSCLING
- MORE TOTAL HAM DIMENSION	- TIGHT WOUND, CONSTRICTED
- LONGER, WIDER, DEEPER HAM	- MUSCLING TOO EXPRESSIVE
- THICKER THROUGH THE RUMP AT THE TAIL AND UPPER 1/3 OF HAM	- NARROW TOP
- MORE NATURAL THICKNESS DOWN THE TOP	- THIN, LIGHT-MUSCLED HAM
- MORE WELL-DEFINED SHOULDER	- FLAT, THIN-MUSCLED SHOULDER
	- STANDS AND WALKS NARROW
	- FINE-BONED

FINISH OR CONDITION

DESIRABLE	UNDESIRABLE
- MORE CORRECT TURN OVER THE TOP	- SQUARE-TOPPED
- CLEANER, TRIMMER (LESS FAT)	- TOO MUCH RIGHT-ANGLE SPREAD
. ALONG THE LOIN EDGE	- LOOSE, WASTY UNDERLINE
. UNDERLINE	- WASTY JOWL
. JOWL	- EXCESS FAT AT THE ELBOW POCKET
. THROUGH THE SHOULDER	- WASTY CROTCH
. AT THE ELBOW POCKET	
. IN THE CROTCH	
. AT THE BASE OF THE HAM	

Source: Livestock Judging Suggestions.

TM 5.2.6h

CARCASS TERMS FOR MARKET HOGS

1. CORRECT FINISH (1.0 TO 1.2 INCHES BACKFAT)

2. DUE TO LESS FAT AND/OR HEAVIER MUSCLING:

   - YIELD A HIGHER CUTTING CARCASS
   - YIELD A HIGHER PERCENT OF 4 LEAN CUTS
   - YIELD A HIGHER PERCENT OF PRIMAL CUTS
   - YIELD A HIGHER PERCENT OF HAM AND LOIN
   - YIELD A CARCASS WITH A HIGHER LEAN-TO-FAT RATIO
   - HEAVIER MUSCLED CARCASS

3. YIELD MORE POUNDS OF RED MEAT PER DAY OF AGE

4. WILL HAVE A HIGHER DRESSING PERCENT BECAUSE:

   - TRIMMER MIDDLE
   - LESS FILL
   - FATTER
   - THICKER BODIED

5. WILL DRESS LOWER BECAUSE:

   - WASTY MIDDLE
   - EXCESSIVE FILL
   - LACKS FINISH
   - NARROW BODIED

Source: Livestock Judging Suggestions.

BREEDING HOG TERMS

1. MORE SIZE, FRAME, SCALE, RUGGEDNESS

2. SOUNDER UNDERLINE

   - MORE FUNCTIONAL NIPPLES (GILT)
   - MORE PROMINENT UNDERLINE
   - MORE TEAT DEVELOPMENT
   - MORE EVEN SPACED TEATS
   - TEATS PLACED FARTHER TO THE FRONT

3. MORE FEMININE (GILT), MASCULINE (BOAR) HEAD AND NECK

4. MOVES MORE FREELY, MORE FLUIDLY

5. MORE BREED CHARACTER

6. MORE WELL-DEVELOPED VULVA (GILT)

7. MORE WELL-DEVELOPED, UNIFORN-SIZED TESTICLES (BOAR)

Source: Livestock Judging Suggestions.

TERMS FOR BOTH BREEDING AND MARKET SHEEP

SKELETAL SIZE, STRUCTURE AND SOUNDNESS

1. LARGER-FRAMED (TALLER, LONGER)
2. MORE SIZE (WEIGHT)
3. LONGER LOIN
4. LONGER RUMP, SQUARER RUMP
5. STRONGER TOP
6. MORE SPRING TO RIB
7. DEEPER FORERIB
8. WIDER, DEEPER CHEST
9. MORE BODY CAPACITY
10. MORE CORRECT SET TO FRONT LEGS
11. MORE STRUCTURALLY SOUND ON FEET AND LEGS
12. SMOOTHER SHOULDERS, LESS OPEN AND COARSE IN SHOULDERS

Source: Livestock Judging Suggestions.

BREEDING SHEEP TERMS

Ewes

1. More refined head and neck
2. Longer, smoother muscling
3. More feminine appearance
4. More reproductive efficiency
5. More functional teats and udder
6. More breed character about head, ears and color markings

Rams

1. More masculine
2. Exhibits more masculinity about head and neck
3. More ruggedness
4. Heavier bone
5. Heavier, more correct in muscling

Source: Livestock Judging Suggestions.

FLEECE TERMS

1. MORE OPEN-FACED, CLEANER-FACED
2. WILL SHEAR MORE POUNDS WOOL
3. WILL YIELD MORE POUNDS CLEAN WOOL
4. LONGER STAPLE
5. MORE UNIFORM IN LENGTH
6. DENSER FLEECE
7. FINER FLEECE
8. MORE UNIFORMITY OF FINENESS
9. LESS BELLY WOOL ON SIDES
10. BRIGHTER, HIGHER QUALITY
11. MORE DISTINCT CRIMP
12. CLEANER, LESS DIRT AND GREASE, WITH HIGHER YIELD
13. SOUNDER, STRONGER FIBERS
14. LESS KEMP

Source: Livestock Judging Suggestions.

ANGUS HEIFERS - EXAMPLE OF REASONS

My placing on this class of Angus heifers was 2-1-3-4.

2 and 1 were structurally correct, growthy, feminine and of modern beef type. 3 was very heavy muscled but lacked size of frame, and 4 lacked adequate weight for age and was excessively fat.

In a close top pair, 2 placed over 1 because she was more feminine and refined about the head and neck and was more correctly and soundly set on her feet and legs. I grant that 1 had more muscle expression in her round, over her top and through her forearm, and stood on larger bone. However, 2 had adequate muscling and bone development for her age and should develop into a more fertile, more efficient cow.

1 was an easy placing over 3 because of her superiority in size of frame and refinement. This was indicated by more height at the withers, more length of body, more correct length of leg, longer smoother muscling, longer thinner neck, smaller jaw and more feminine head. 1 also walked with a longer, easier stride and should remain sounder on her feet and legs. Due to her more correct muscling overall, refinement and udder and teat development, she should experience less calving problems and be superior to 3 in milk production.

In the bottom pair, 3 placed over 4 because of her superior weight for age, trimness and muscling. I fault 3 for exhibiting excessive bulge of muscle for a heifer of her age, and grant that 4 was more refined. However, the progeny of 3 should possess more weight for age and a higher muscle to fat ratio when compared to the progeny of 4.

4 placed last because she was off type, in that she was too early maturing as evidenced by her short legs and excessively short, deep, fat body. She had excessive fat in her brisket and was especially faulted for excessive fat deposits in her udder, which may impair her future milk production.

For these reasons, I placed this class of Angus heifers 2-1-3-4.

Source: Livestock Judging Suggestions.

CHAROLAIS BULLS - EXAMPLE OF REASONS

I placed this class of Charolais bulls 4-3-2-1.

All the bulls in this class carried adequate thickness of muscle; however, there were obvious differences in size of frame, soundness of structure and composition of gain.

4 was an outstanding modern beef bull that possessed to a high degree the traits of economic importance in today's beef industry. He was ranked over 3 because of his superior size of frame and composition of gain, combined with longer muscling and easier, more correct movement. I recognize that the weight per day of age advantage went to 3, but it was primarily due to his greater degree of finish and heavier middle. Both 4 and 3 should sire fast growing, muscular calves, but I would expect 4's progeny to have an advantage in cutability and soundness.

In the middle pair, 3 easily excelled 2 because of his superior size, as evidenced by more length and thickness of body. I fault 3 for excessive thickness of shoulder and excessive depth and wastiness of brisket and underline. He appeared to have been on a very high plane of nutrition. However, due to his excellent weight for age, masculinity and muscling, he should make a superior breeding bull when compared to 2.

2 and 1 were difficult to place, as both had definite desirable traits and obvious faults. I chose the more structurally correct 2 over the longer, more growthy 1 because 2 had a more correct angle to his hock and walked with a longer, easier stride, which should enable him to have fewer stifle injuries and add to his breeding efficiency. I fault 2 for evidences of early maturity and the lowest weight for age in the class. However, cows mated to 2 should experience few calving difficulties and their progeny should have no problems reaching the choice grade at 1100 pounds.

Even though 1 was a large, muscular, heavy-boned bull, I placed him bottom because he was post-legged, straight-shouldered, and lacked proper testicle development for a bull of his age. Therefore, he will be the least sound and least efficient, and will have the most breeding problems of the bulls in this class.

For these reasons, I placed this class of Charolais bulls 4-3-2-1.

Source: Livestock Judging Suggestions.

CROSSBRED SLAUGHTER STEERS - EXAMPLE OF REASONS

I placed this class of crossbred slaughter steers 1-2-3-4.

1 was an outstanding top as he combined growthiness, superior muscling and correct finish to a high degree. 2 was correct in conformation but slightly overfinished 3 exhibited excellent muscling and cutout, but lacked in finish. And 4 was excessively overfinished, below average in muscling and low cutting.

1 placed top and over 2 because he was growthier as indicated by more weight, length and height of body. He was also more correctly finished than 2, as evidenced by fewer fat deposits in his brisket, rear flanks and twist, and a better turn over his back and loin. Because of his smoother, less wasty finish, 1 will yield a carcass with a higher percent of the boneless retail trimmed loin, rib, round and chuck, His superior size and scale indicated he made a faster, more efficient rate of gain. He should yield a choice quality, yield grade 2 carcass.

In regard to the middle pair, 2 placed over 3 because he exhibited enough finish to grade choice and would also have a higher dressing percent. We grant that 3 would have higher cutability and yield a carcass with little fat trim. However, 2's higher quality grade along with his superior dressing percentage will enable him to be a more valuable steer that will yield a more palatable beef. 2 was estimated to be an average choice, yield grade 3.

3 was an easy placing over 4 because of more efficient growth, superior muscling and much higher cutout due to less trimmable fat. His superior muscling was indicated by a much larger, plumper forearm, more fullness and thickness of round, and more width between his hind legs. 3 certainly showed less fat all along his underline, over his ribs and around his tail head. I recognize that 3 did not possess the finish to grade choice; however, his carcass will be more valuable than the choice grade #4 due to an advantage of at least 2 yield grades.

4 placed last because he was overfinished as indicated by his full, pendulous brisket; deep, full rear flanks and twist; pones of fat around his tail head; excess fat along his loin edges; and his overall smoothness and uniformity of width and depth. He will, therefore, produce a yield grade 4 or 5 carcass with excessive fat trim that will result in it being the least valuable. He also lacked definition and evidence of muscling in his shoulder and round. His composition of gain was indicative of inefficient feed conversion.

For these reasons, I placed this class of crossbred slaughter steers 1-2-3-4.

Source: Livestock Judging Suggestions.

DUROC GILTS - EXAMPLE OF REASONS

I placed this class of Duroc gilts 1-4-3-2.

Both 1 and 4 were big framed, well balanced, broody gilts showing excellent breed character. 1 placed over 4 because she was deeper ribbed, longer bodied, and longer and leveler in the rump. She was more correct in her muscle structure, had more cushion to her front legs and moved more freely and easily. I grant that 4 had less condition over the top and showed more teat development, but the front nipples on 1 were farther to the front.

Coming to the middle pair, 4 was an easy placing over 3 because 4 was bigger in her framework with a more rectangular rib cage, had more natural thickness down the top, yet was freer of fat than 3. 4 also was more feminine, had a more prominent underline and a more well developed vulva. I grant that 3 was heavier boned with a more desirable slope to her shoulder and more cushion up front.

In the bottom pair, I grant that 2 was heavier muscled, thicker down the top and had a larger vulva, but I placed 3 over 2 because she was longer sided, longer rumped, looser in her muscle structure, broodier in her underline with more cushion and correctness to her front legs. 3 also moved more freely and easily.

Even though 2 was heavy boned, well-muscled and stood and walked wider than any other gilt in the class, she placed last because she was too short and thick in her muscling, too straight in her shoulder, constricted in her movement, and had the least developed underline in the class.

For these reasons, I placed this class of Duroc gilts 1-4-3-2.

Source: Livestock Judging Suggestions.

CROSSBRED SLAUGHTER BARROWS - EXAMPLE OF REASONS

I placed this class of crossbred barrows 3-4-1-2.

The large-framed, high-cutting 3 was an easy top, followed by a close middle pair and an easy bottom in the shallow-bodied 2.

3 had more depth of chest and greater total dimension to his frame than any other pig in the class; however, I would like to see him longer in his muscle structure. 3 placed over 4 because of his greater body capacity, total ham dimension and more correct finish. 3's ham advantage was due to his longer rump and greater depth from the tail to the base of the ham. 3 had less finish over the loin edges, and through the shoulder, crotch and base of the ham. I grant that 4 was thicker over the top and longer muscled. Both 3 and 4 should yield muscular carcasses, but 3 will have a higher valued carcass because of less fat trim.

The middle pair, 4 and 1, were similar in size and conformation. Both pigs needed more skeletal size. Although 1 will yield a higher percentage of lean cuts because of less fat trim, 4 placed over 1 because of more body capacity; more thickness down the top; longer rump; deeper, thicker ham; more correct muscle structure; and sounder feet and legs. 4 will have a higher dressing percentage because of his thicker body, tighter middle and more finish.

Although 1 was a bit tight in his muscle structure, he was an easy placing over the shallow-bodied 2. 1's greater depth of chest and more total body capacity gave him a big advantage in growth and efficiency. The heavier boned 1 also stood and walked wider and had more total ham dimension. Due to less fat trim and heavier muscling, 1 will yield a higher percent of primal cuts.

2 placed last because of his lack of body capacity. He was also the narrowest-based, shortest-rumped, lightest-muscled pig in the class.

For these reasons, I placed this class of crossbred barrows 3-4-1-2.

Source: Livestock Judging Suggestions.

RAMBOUILLET EWES - EXAMPLE OF REASONS

I placed this class of Rambouillet ewes 3-2-1-4.

I placed 3 over 2 because she showed more size and scale, more spring of rib, a thicker top and straighter hind legs. 3 also had a more desirable fleece as indicated by a longer, finer staple, brighter color and more desirable Rambouillet character. I criticized 3, however, for being slightly woolly-faced, and grant that 2 was more open-faced.

Although 2 stood slightly crooked on her hind legs, I placed 2 over 1 because she was a more rugged ewe, as indicated by more spring of rib, a deeper chest and more size and scale. 2 also had a more open face and a denser, more uniform fleece both in length and fineness. I grant that 1 had a slightly longer staple and stood straighter on her hind legs.

The bottom pair, 1 and 4, were very close, as both were woolly-faced and had belly wool high on their sides. However, I placed 1 over 4 because she was a more muscular, rugged ewe as indicated by more width of top, a squarer dock and heavier bone. 1 also had a more feminine head than 4. I will grant that 4's fleece was more uniform in fineness.

I placed 4 bottom in the class because she was woolly-faced, lacked size and scale and Rambouillet breed character about her head, had excessive belly wool and would shear the least amount of clean wool of any other ewe in the class.

For these reasons, I placed this class of Rambouillet ewes 3-2-1-4.

Source: Livestock Judging Suggestions.

HAMPSHIRE EWES - EXAMPLE OF REASONS

I placed this class of Hampshire ewes 2-3-1-4.

2 was the largest, growthiest, and heaviest muscled ewe in the class. In my top pair I placed 2 over 3 because she was a larger, longer topped and thicker muscled ewe than 3. 2 was smoother in her shoulder; meatier across her loin; longer in her rump; and was thicker, meatier and heavier muscled in her leg than 3. Also, 2 stood on heavier bone and straighter front legs and had a longer, denser, cleaner fleece than 3. I grant that 3 was straighter on her hind legs and breedier about her head than 2.

3 placed over 1 in the middle pair because she was a more correctly balanced, straighter lined, stronger topped ewe that was meatier in her loin, longer in her rump and meatier and plumper in her leg. 3 was a wider fronted, breedier headed ewe that also stood wider and straighter on her hind legs than 1. I grant that 1 was a larger ewe and had more size and scale than 3.

I favored 1 over 4 because she was a larger, growthier, more rugged ewe, and especially because she stood on more bone than 4. 1 was a longer coupled, heavier muscled ewe that was meatier through her shoulders, meatier across her loin and longer in her rump than 4. I grant, however, that 4 was a stronger topped, straighter lined ewe than 1.

I placed 4 last because she was the smallest, shortest coupled, finest boned ewe in this class.

For these reasons, I placed this class of Hampshire ewes 2-3-1-4.

Source: Livestock Judging Suggestions.

CROSSBRED SLAUGHTER LAMBS - EXAMPLE OF REASONS

My placing on this class of crossbred slaughter lambs was 3-4-2-1.

The correctly finished, muscular 3 and 4 were a close top pair, with the narrow, underfinished, low grading 1 an obvious bottom and the light legged 2 a logical third.

I placed 3 over 4 in a close placing because he was more muscular as evidenced by a thicker, more muscular leg and fuller, meatier shoulder, rack, and loin. 3 was faulted for being weak of top and carrying excess fill. I concede that 4 was firmer and stronger of top and trimmer of middle. However, 3 should yield a more muscular, higher cutting, higher grading carcass.

In the middle pair, 4 was an easy placing over 2 because 4 was superior in almost every respect. 4 and 2 were similar in degree of finish; however, 4 was more uniformly finished. He was also superior to 2 in muscling because he had a much larger, plumper, meatier leg and stood with more width both front and rear. 4 was also trimmer of middle and lighter of pelt, giving him the advantage in dressing percentage and making him more valuable to the packer-buyer. 4 also should yield a carcass with a higher percent of leg and loin, making his carcass more desirable to the retailer.

2 was an easy placing over 1 because he was fatter and more muscular and would therefore yield a higher quality grading carcass. He was especially more muscular over his top and more adequately covered over his ribs, loin and rump.

1 placed bottom because he lacked the desired finish and meatiness of the other lambs in this class. He was narrow of shoulder, rack, loin and rump; lacked plumpness of leg; and had insufficient fat covering over his top. Therefore, he would yield the lowest quality grading, least attractive carcass of this class.

For these reasons, I placed this class of crossbred slaughter lambs 3-4-2-1.

LIST OF RESOURCES

Books

Animal Science, 7th ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1977. 1047 pages.

Animal Science and Industry Laboratory Manual, Bill V. Able, Dell M. Allen, Robert H. Hines, and Miles McKee. Kendall/Hunt Publishing Company, Dubuque, Iowa 52001, 1978. 77 pages.

Basic Animal Science, 6th ed., W. T. Berry, Jr., A. M. Sorensen, Jr., and L. D. Wythe, Jr. Kendall/Hunt Publishing Company, Dubuque, Iowa 52001, 1978. 187 pages.

Beef Cattle Science, 5th ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1976. 1556 pages.

Beef Production, 3rd ed , Ronald V. Diggins and Clarence E. Bundy. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1971. 276 pages.

Dairy Cattle Science, 1st ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1971. 524 pages.

Dairy Production, 4th ed., Ronald V. Diggins, Clarence E. Bundy, and Virgil W. Christensen. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1979. 326 pages.

Horses and Horsemanship, 5th ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1977. 537 pages.

Live Animal: Carcass Evaluation and Selection Manual, Donald L. Boggs and Robert A. Merkel. Kendall/Hunt Publishing Company, Dubuque, Iowa 52001, 1979. 187 pages.

Livestock and Poultry Production, 4th ed., Clarence E. Bundy, Ronald V. Diggins, and Virgil W. Christensen. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1975. 630 pages.

Livestock Judging Manual, Jarold Callahan. Northeastern Oklahoma A & M, Miami, Oklahoma. 56 pages.

Livestock Judging, Selection, and Evaluation, 2nd ed., Roger E. Hunsley, W. Malcolm Beeson, and Julius E. Nordby. The Interstate, Danville, Illinois, 1978. 527 pages.

Livestock Production, 2nd ed., H. H. Cole. W. H. Freeman and Company, San Francisco, California, 1966. 827 pages.

Poultry Science, 1st ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1971. 276 pages.

Progressive Farmer, Beef Cattle Book: A Working Guide for Cattlemen, Tom Curl. Oxmoore House, Inc., Birmingham, Alabama, 1978. 182 pages.

Sheep and Wool Science, 4th ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1979. 948 pages.

The Stockman's Handbook, 5th ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1978. 1192 pages.

Swine Production, 4th ed., Clarence E. Bundy, Ronald V. Diggins, and Virgil W. Christensen. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1976. 374 pages.

Swine Science, 4th ed., M. E. Ensminger. The Interstate, Danville, Illinois, 1970. 881 pages.

The Science of Animal Husbandry, James Blakely and David Bade. Reston Publishing Company, Reston, Virginia, 1976. 416 pages.

Working in Animal Science, Paul Peterson, Allen C. Christensen, and Edward A. Nelson. Gregg Division, McGraw-Hill Book Company, 1978. 248 pages.

Other Publications

Livestock Judging Guide. Agricultural Education Department, The Pennsylvania State University, University Park, Pennsylvania 16802. 1979.

Livestock Judging Suggestions, MP-704. Larry L. Boleman, T. D. Tanksley, Jr., and L. D. Wythe, Jr. Texas Agricultural Extension Service, Texas A & M University, College Station, Texas, 1976. 20 pages.

Judging Market Beef Cattle: Guide for Beginning Judges. Tom Wickersham. Cooperative Extension Service, Iowa State University, Ames, Iowa 50011, 1977. 4 pages.

Judging Market Lambs: Guide for Beginning 4-H Members, Tom Wickersham. Cooperative Extension Service, Iowa State University, Ames, Iowa 50011, 1977. 4 pages.

Judging Swine: Guide for Beginning Judges, Tom Wickersham. Cooperative Extension Service, Iowa State University, Ames, Iowa 50011, 1977. 4 pages.

Movies

"Profitable Pork Selection," Farm Film Foundation, Suite 424, Southern Building, 1425 H Street, N. W., Washington, D.C. 20005, 12 minutes.

"Today's Guidelines for Pork," Venard Films, Ltd., Box 1332, Peoria, Illinois 61654.

Slides and Slidefilms

Appraising Market Hogs for Carcass Merit (30 slides, illustrated script). Ohio Agricultural Education Curriculum Service, The Ohio State University, Room 254, 2120 Fyffe Road, Columbus, Ohio 43210. Price: $6.90; script only, $.50.

Swine Carcass Evaluation (60 frames). Vocational Education Productions, California Polytechnic State University, San Luis Obispo, California 93407. Price: $10.50.

Livestock Judging Kit 1 (75 slides), 10 steer classes, 1 bull class, 7 heifer classes, and 7 sheep classes. Vocational Education Productions, California State University, San Lois Obispo, California 93407. Price: $36.00.

Livestock Judging Kit 2 (30 slides), 9 sheep classes and 3 steer classes. Vocational Education Productions, California State University, San Luis Obispo, California 93407. Price: $21.00.

Livestock Judging Kit 3 (21 slides), 5 heifer classes, 1 steer class, and 1 bull class. Vocational Education Productions, California State University, San Luis Obispo, California 93407. Price: $13.00.

Livestock Judging Kit 4 (24 slides), 1 bull class, 1 heifer class, 1 steer class, 3 sheep classes, and 3 market hog classes. Vocational Education Productions, California State University, San Luis Obispo, California 93407. Price: $14.00.

Livestock Judging Kit 5 (25 slides), 2 steer classes, 1 bull class, 5 swine classes, and 2 sheep classes. Vocational Education Productions, California State University, San Luis Obispo, California 93407. Price: $16.00.

NOTE: All five sets above may be purchased for $75.00.